ORDER NO. MD0201013C1

A6

Service Manual

CD Stereo System

COMPACT disc DIGITAL AUDIO

SA-PM12P

Color

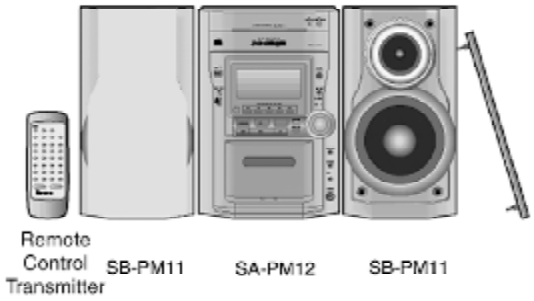
(K)... Black Type

TAPE SECTION :

AR2 MECHANISM SERIES

CD SECTION :

RAE0152Z-3 TRAVERSE DECK SERIES



SPECIFICATIONS

Specifications

■ AMPLIFIER SECTION

Power output	
10% Total harmonic distortion	
1 kHz, both channels driven	**45 W per channel (6 Ω)**
70 Hz - 16 kHz, both channels driven	**40 W per channel (6 Ω)**
Input sensitivity	
AUX	**250 mV**
Input Impedance	
AUX	**13 k Ω**

■ FM TUNER SECTION

Frequency range	**87.9 - 107.9 MHz (200 kHz steps)**
	87.5 - 108.0 MHz (100 kHz steps)
Sensitivity	**2.5 μV (IHF)**
S/N 26 dB	**2.2 μV**
Antenna terminal(s)	**75 Ω (unbalanced)**

■ AM TUNER SECTION

Frequency range	
AM	**520-1710 kHz (10 kHz steps)**
Sensitivity	
AM	
S/N 20 dB (at 1000kHz)	**560 μV/m**

■ CASSETTE DECK SECTION

Track system	**4 track, 2 channel**
Heads	
Record/playback	**Solid permalloy head**
Erasure	**Double gap ferrite head**
Motor	**DC servo motor**
Recording system	**AC bias 100 kHz**
Erasing system	**AC erase 100 kHz**
Tape speed	**4.8 cm/s**
Frequency response (+3 dB, -6 dB at DECK OUT)	
NORMAL (TYPE I)	**50 Hz - 13 kHz**
HIGH (TYPE II)	**50 Hz - 13 kHz**
S/N	**50 dB (A weighted)**
Wow and flutter	**0.18 % (WRMS)**
Fast forward and rewind time	**Approx. 120 seconds with C-60 cassette tape**

■ CD SECTION

Sampling frequency	**44.1 kHz**
Decoding	**16 bit linear**
Beam source/wave length	**Semiconductor laser/780 nm**
Number of channels	**Stereo**
Frequency response	**20 Hz - 20 kHz (+1, -2 dB)**
Wow and flutter	**Below measurable limit**
Digital filter	**8 fs**
D/A converter	**MASH (1 bit DAC)**

■ GENERAL

Power supply	AC 120 V, 60Hz
Power consumption	125 W
Standby	0.6 W
Dimensions (W x H x D)	200 x 260 x 345 mm (7 7/8” x 10 1/4” x 13 19/32”)
Mass	5.6 kg (12.3 lb)

■ SYSTEM

SC-PM12(P)	Music Center: SA-PM12(P) Speaker: SB-PM11(P)

Notes:

1. Specifications are subject to change without notice. Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1. Safety Precaution

(This “Safety Precaution” is applied only in U.S.A.)

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer’s recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

1.1. Insulation Resistance Test

1. Unplug the power cord and short the two prongs of the plug with a jumper wire.

2. **Turn on the power switch.**
3. **Measure the resistance value with ohmmeter between the jumper AC plug and each exposed metal cabinet part, such as screwheads, antenna, control shafts, handle brackets, etc.**
   Equipment with antenna terminals should read between 3 M Ω and 5.2 M Ω to all exposed parts*.(Fig.1)
   Equipment without antenna terminals should read approximately infinity to all exposed parts.(Fig.2)
   ***Note: Some exposed parts may be isolated from the chassis by design. These will read infinity.**
4. **If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.**

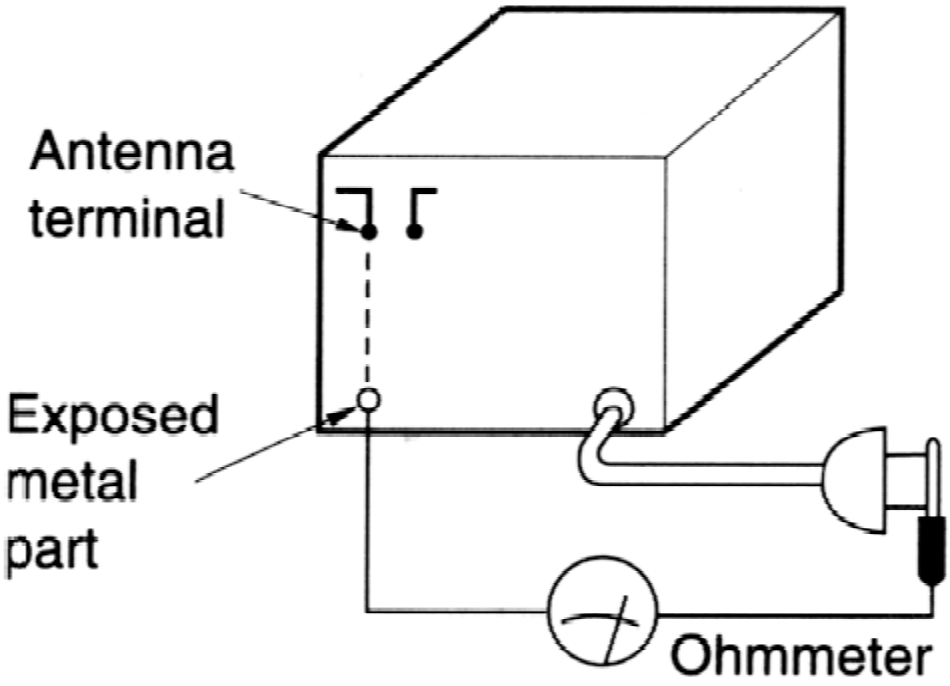


Fig. 1

Resistance = 3MΩ – 5.2MΩ

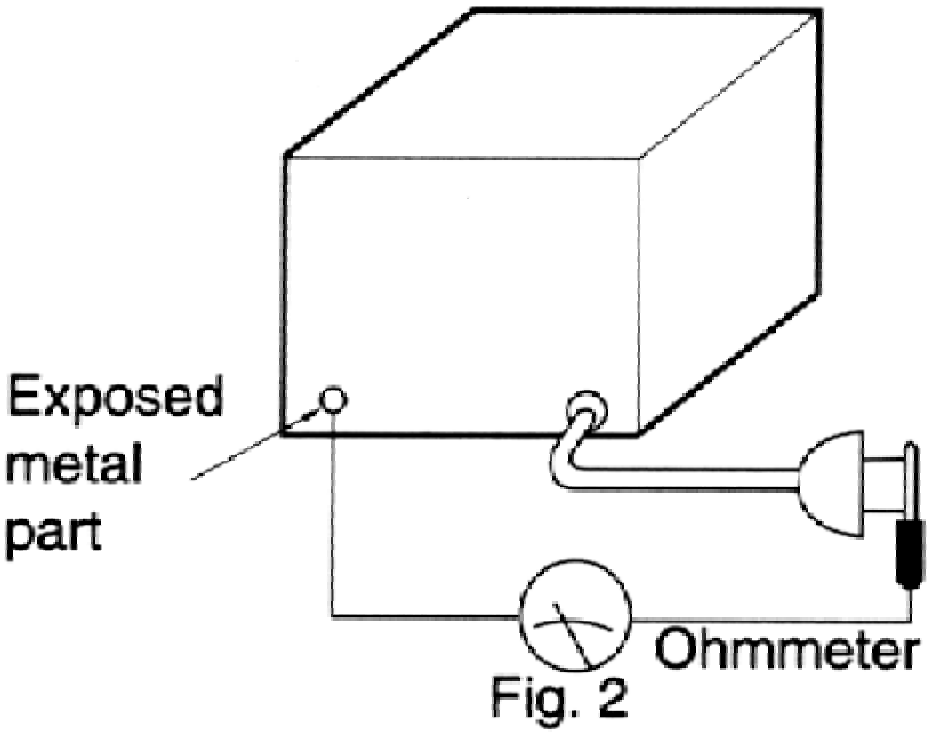


Fig. 2

2. Before Repair and Adjustment

Disconnect AC power, discharge Power Supply Capacitors C506, C507 and C508 through a 10 Ω , 5W resistor to ground.
DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.
After repairs are completed, restore power gradually using a variac, to avoid overcurrent.
Current consumption at AC 120V, 60 Hz in NO SIGNAL mode should be ~420mA.

3. Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is turned on.

- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are
“shorted”, or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.
If this occurs, follow the procedure outlines below:

1. Turn off the power.

2. Determine the cause of the problem and correct it.

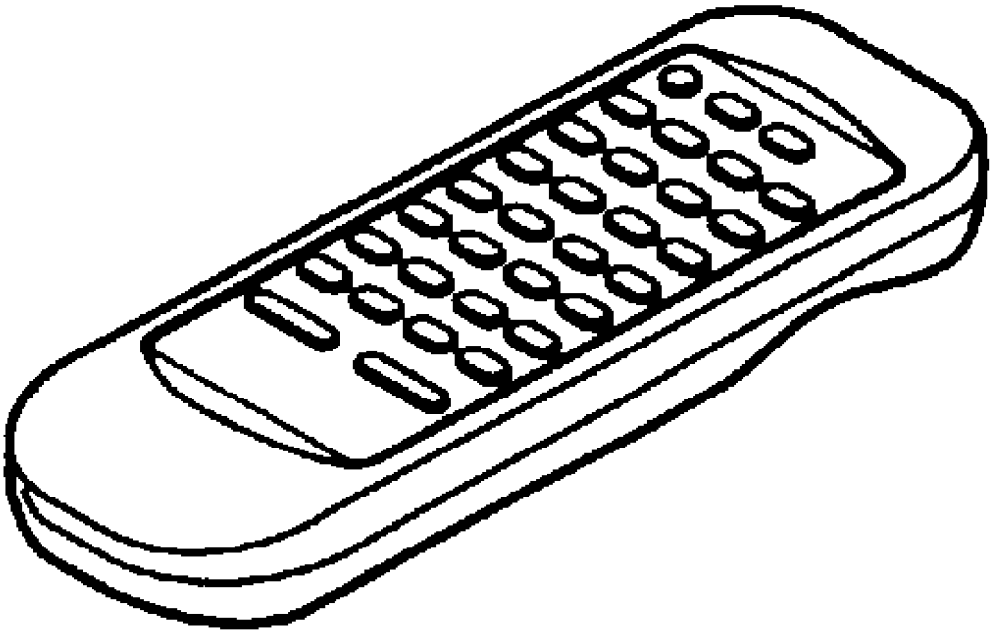
3. Turn on the power once again after one minute.

Note :
When the protection circuitry functions, the unit will not operate unless the power is first turned

off and then on again.

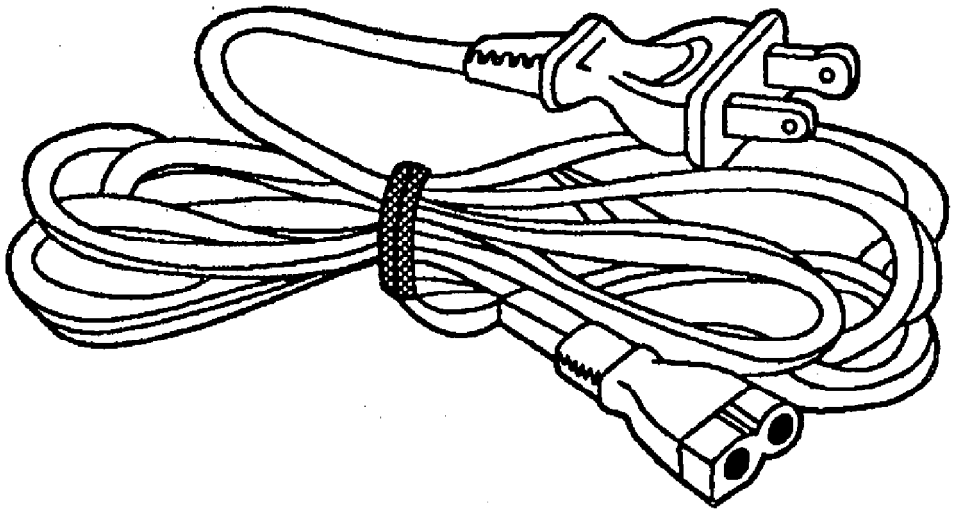
4. Accessories

Remote Control Transmitter

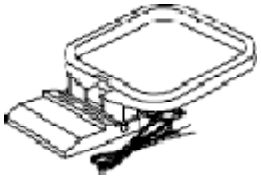


FM indoor antenna

AC power supply cord



AM Loop antenna

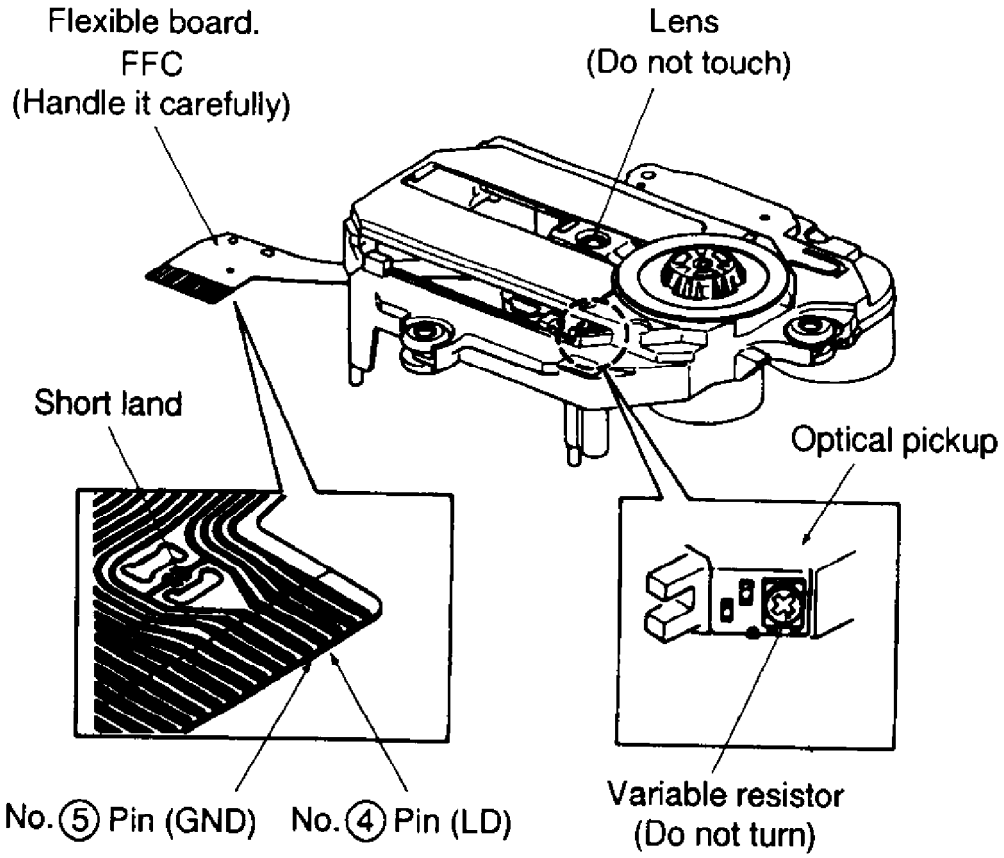


5. Handling Precautions For Traverse Deck

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.
So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

- Handling of traverse deck (optical pickup)

1. **Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.**
2. **The short land between the No.4(LD) and No.5(GND) pins on the flexible board (FFC) is shorted with a solder build-up to prevent damage to the laser diode.To connect to the PC board, be sure to open by removing the solder build-up, and finish the work quickly.**
3. **Take care not to apply excessive stress to the flexible board (FFC).**
4. **Do not turn the variable resistor (laser power adjustment). It has already been adjusted.**



- Grounding for electrostatic breakdown prevention

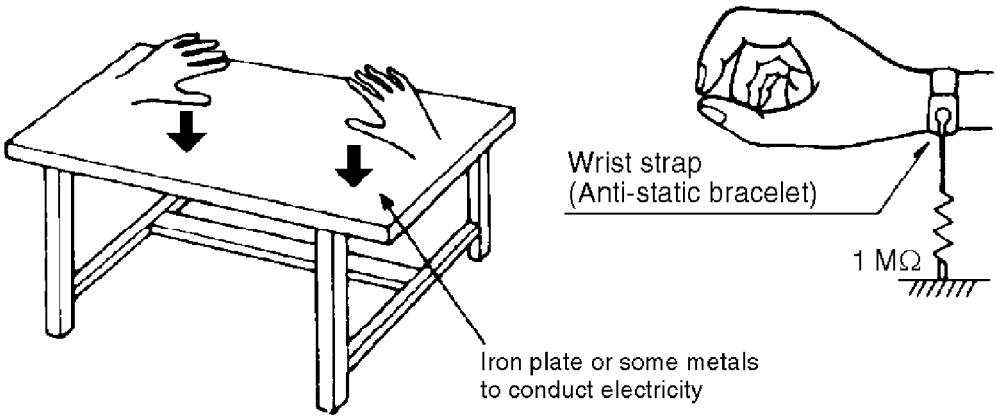
1. **Human body grounding**
   Use the anti-static wrist strap to discharge the static electricity from your body.
2. **Work table grounding**
   Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution :

The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).

Caution when Replacing the Traverse Deck :

The traverse deck has a short point shorted with solder to protect the laer diode against electroststics breakdown. Be sure to remove the solder from the short point before making connections.



6. Precaution of Laser Diode

CAUTION:

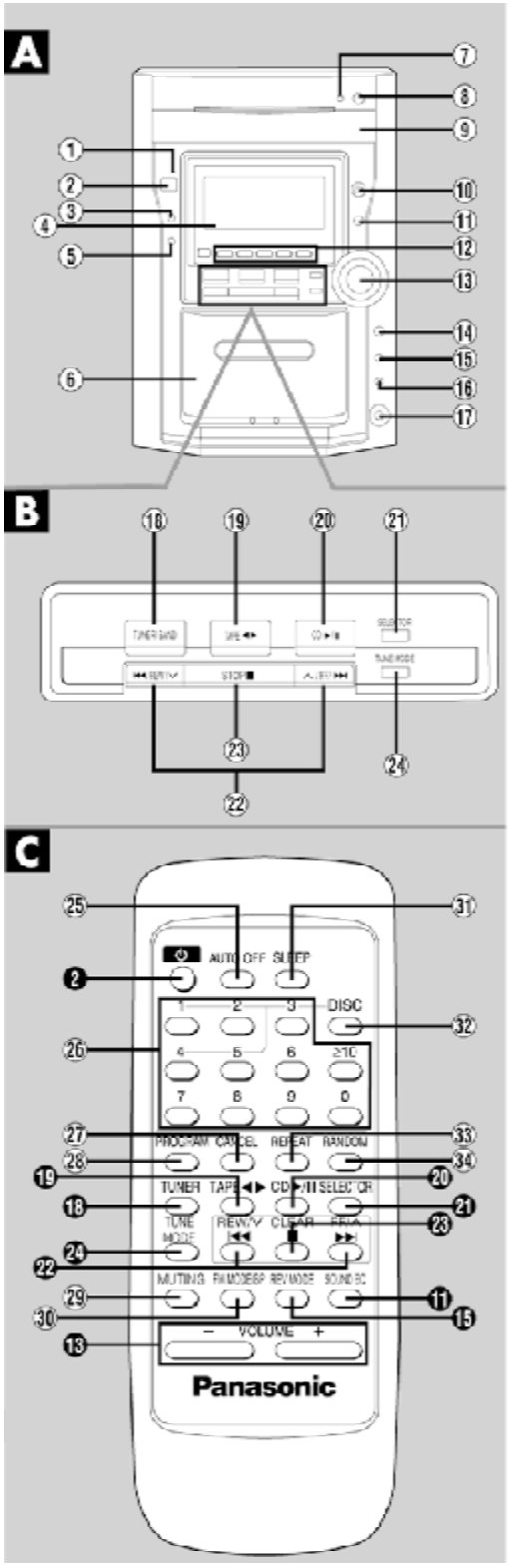
This unit utilizes a class 1 laser.
Invisible laser radiation is emitted from the optical pickup lens.
When the unit is turned on:

1. **Do not look directly into the pick up lens.**
2. **Do not use optical instruments to look at the pick up lens.**
3. **Do not adjust the preset variable resistor on the pickup lens.**
4. **Do not disassemble the optical pick up unit.**
5. **If the optical pick up is replaced, use the manufacturer's specified replacement pick up only.**
6. **Use of control or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.**

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN TH
SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

7. Operation Procedures



Front panel controls

A Main unit

No.	Name
①	AC supply indicator (AC IN) This indicator lights when the unit is connected to the AC power supply.
②	Standby/on switch (⏻/I, POWER) Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
③	Clock/timer and demonstration button (CLOCK/TIMER, –DEMO)
④	Display
⑤	Play timer/record timer button (⏻PLAY/⏻REC)
⑥	Cassette holder
⑦	CD manager button (CD MANAGER)
⑧	CD tray open/close button (⏏ CD OPEN/CLOSE)
⑨	Disc tray
⑩	Super sound equalizer button (SUPER SOUND EQ)
⑪	Sound equalizer control (SOUND EQ)
⑫	Disc direct play button (CD 1 ~ CD 5)
⑬	Volume control (VOLUME Down, Up)
⑭	Deck open button (⏏ DECK OPEN)
⑮	Reverse mode select button (REV MODE)
⑯	Recording start/pause button (● REC/ II)
⑰	Headphone jack (PHONES)

B Center console

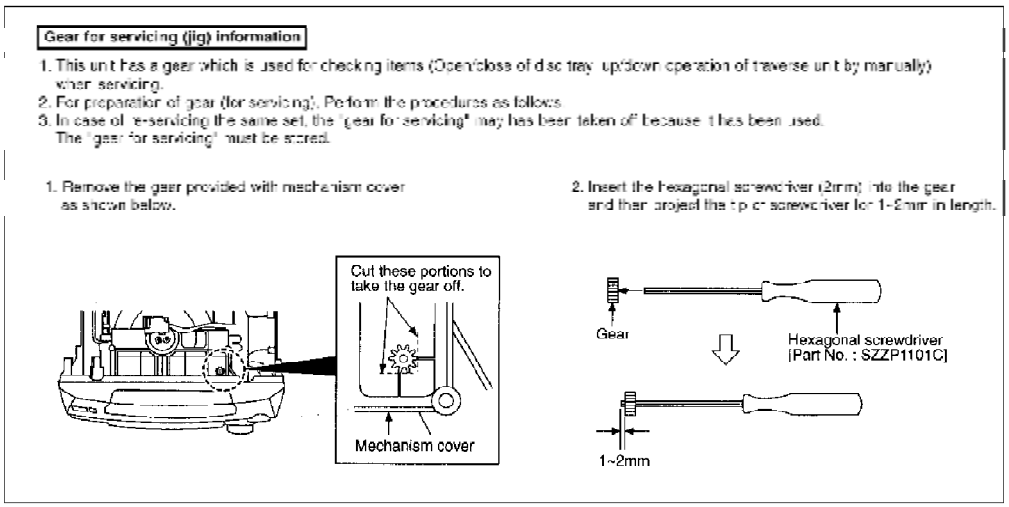
⑱	Tuner/band select button (TUNER/BAND)
⑲	Tape play/direction button (TAPE ◄ ►)
⑳	CD play/pause button (CD ►/ II)
㉑	CD, Tuner, Tape, Aux select button (SELECTOR)
㉒	Skip/Search/Preset channel button (I◄◄/REW/∨, ∧/FF/►►I)
㉓	CD, Tape stop button (STOP ■)
㉔	button (TUNE MODE)

C Remote control

Buttons such as ❷ functions in exactly the same way as the buttons on the main unit.

No.	Name
㉕	Auto off button (AUTO OFF)
㉖	Numeric buttons (≥10, 1–9, 0)
㉗	Cancel button (CANCEL)
㉘	Program button (PROGRAM)
㉙	Muting button (MUTING)
㉚	FM mode/BP button (FM MODE/BP)
㉛	Sleep button (SLEEP)
㉜	Disc button (DISC)
㉝	Repeat button (REPEAT)
㉞	Random button (RANDOM)

8. Operation Checks and Main Component Replacement Procedures


Gear for servicing (jig) information
1. This unit has a gear which is used for checking items (Open/close of disc tray, up/down operation of traverse unit by manually) when servicing.
2. For preparation of gear (for servicing), Perform the procedures as follows.
3. In case of re-servicing the same set, the "gear for servicing" may has been taken off because it has been used. The "gear for servicing" must be stored.
1. Remove the gear provided with mechanism cover as shown below.
2. Insert the hexagonal screwdriver (2mm) into the gear and then project the tip of screwdriver for 1-2mm in length.
Cut these portions to take the gear off.
Mechanism cover
Gear
Hexagonal screwdriver [Part No. : SZZP1101C]
1~2mm

“ATTENTION SERVICER”

Some chassis components may have sharp edges.
Be careful when disassembling and servicing.

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures.**
   Special reassembly procedures are described only when required.
3. **Select items from the following index when checks or replacement are required.**

Contents

- **Disassembly and assembly main unit**
  1. **Checking of the Main, Panel, Deck and Power P.C.B.**
- **Main Component Replacement Procedures**
  1. **Replacement of the Traverse Deck.**
  2. **Replacement of the Power Amplifier IC.**
- **Disassembly and assembly of the Traverse Unit**
- **Disassembly and assembly of the Disc Tray**

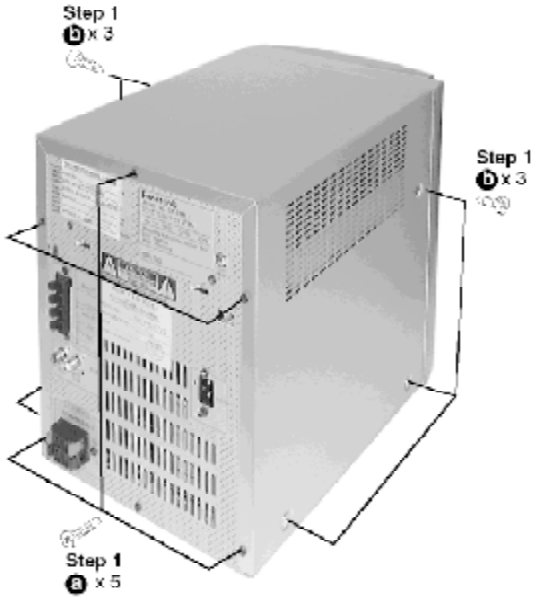
Warning:

This product uses a laser diode. Refer to caution statement Precaution of Laser Diode.

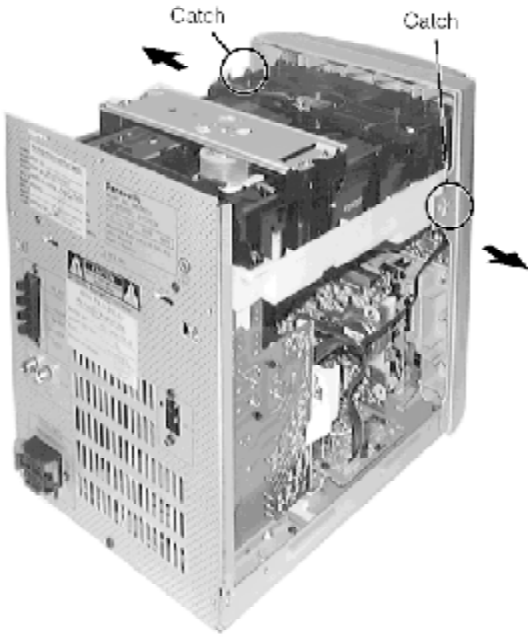
8.1. Checking Procedure for each major P.C.B.

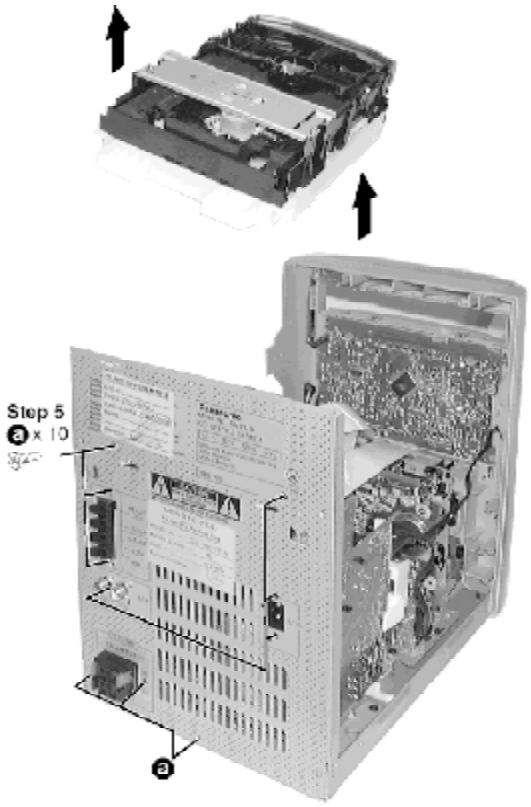
Step 1 Remove 3 screws each side and 5 screws at rear panel.

Step 2 Remove the Top Cabinet



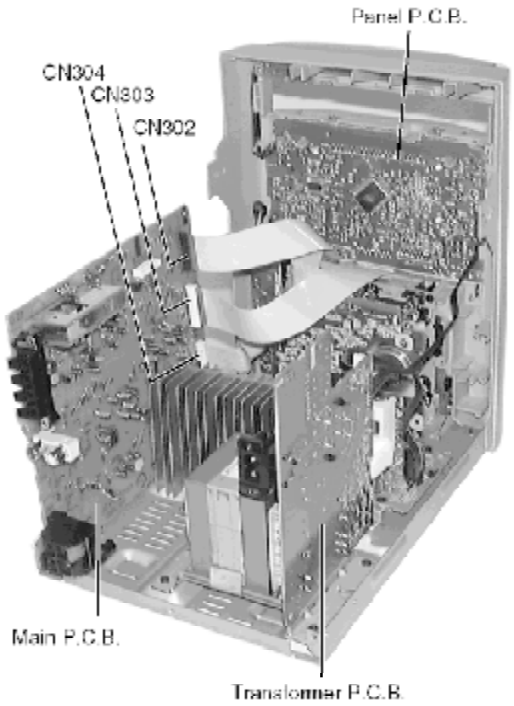
Step 3 Push catches each side. Remove 2 screws on top to release CD lid.



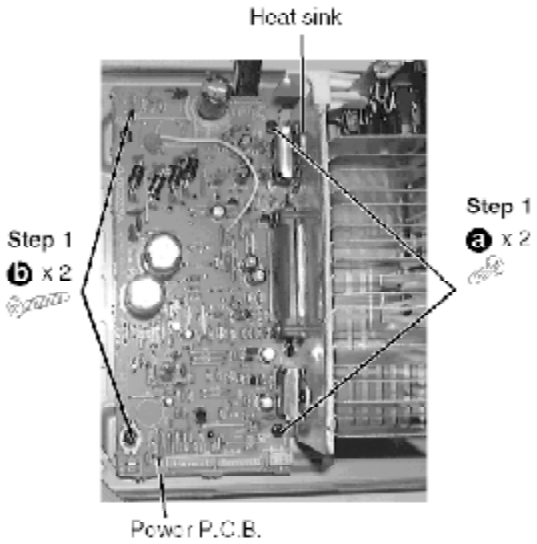


Step 4 Remove the CD changer base together with the CD changer.
Step 5 Release 10 screws at rear panel.

- Checking for Main P.C.B, Panel P.C.B. and Transformer P.C.B



Step 1 Remove 2 screws each side.

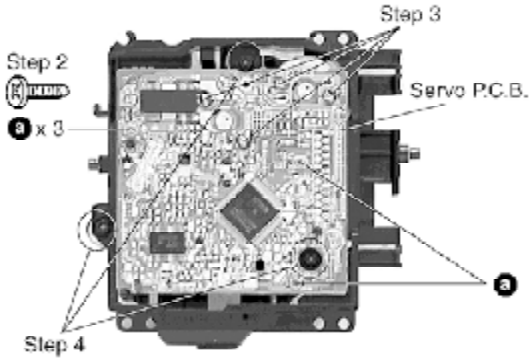


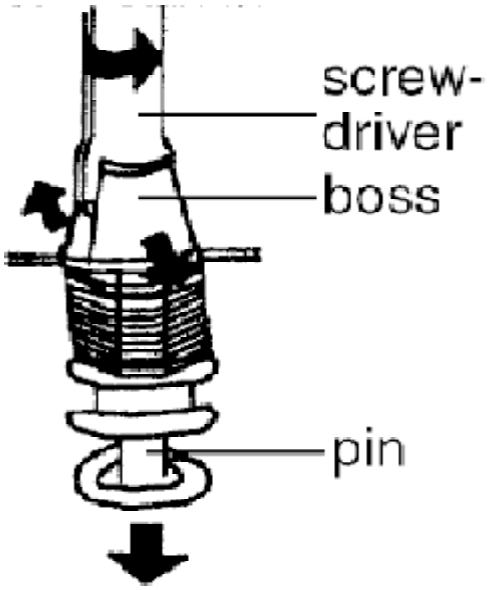
- Checking for Power P.C.B.

8.2. Main Component Replacement Procedures

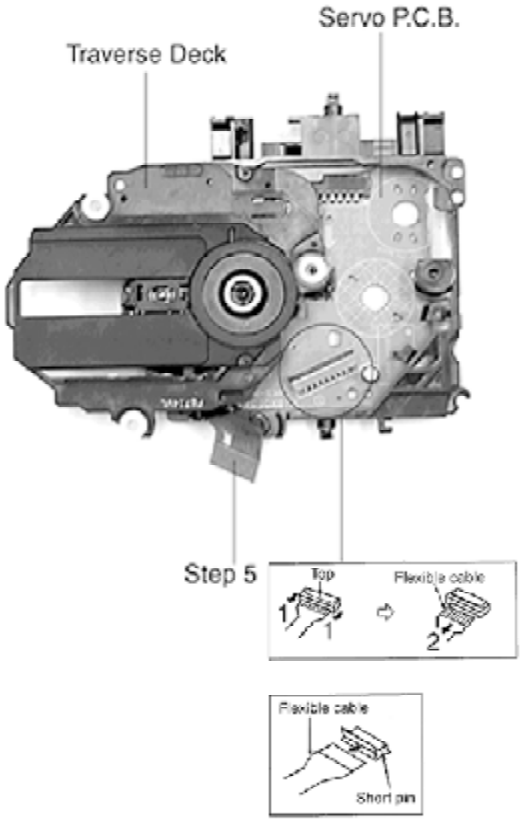
1. Replacement of the Traverse Deck

Step 1 Follow the procedures in ‘Disassembly of the Traverse Unit’ (Step 1 - Step 4)





Step 3 Desolder the 4 legs of the 2 motors and pull out the Servo P.C.B.
Step 4 Widen the 3 bosses with a flat screwdriver and pull out the 3 pins. Then remove the Traverse Deck.



Step 5 Remove the flexible cable CN 701.

- Removal of the flexible cable. Push the top of the connector in the direction of the arrow 1, and then pull out the flexible cable in the direction of the arrow 2.

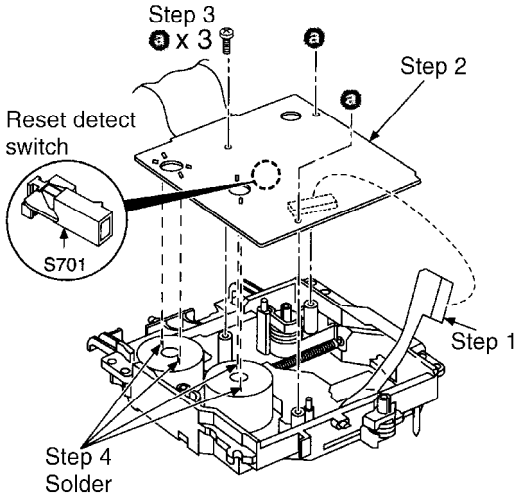
Note:

Insert a short pin into the flexible cable for traverse unit.

- Installation of the CD servo P.C.B. after replacement

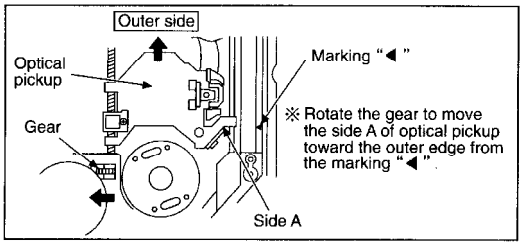
Step 1 Connect the FFC board.

Step 2 Install the CD servo P.C.B. in the traverse deck assembly.



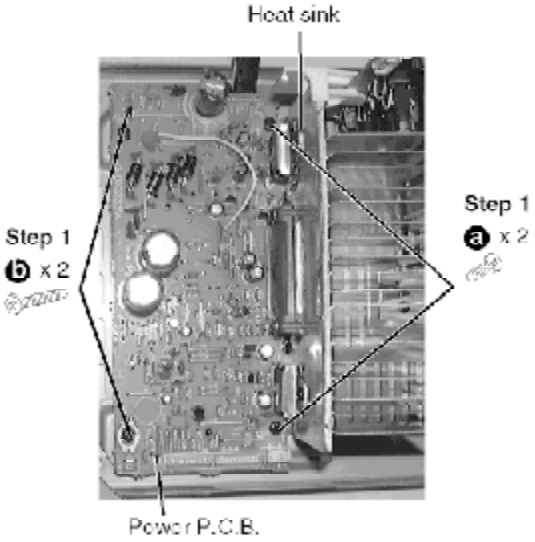
Note:

Before installing the CD servo P.C.B., move the optical pickup towards the outer edge from the marking (black triangle). [Otherwise, the reset detect switch (S701) mounted on the CD servo P.C.B. may be damaged.]

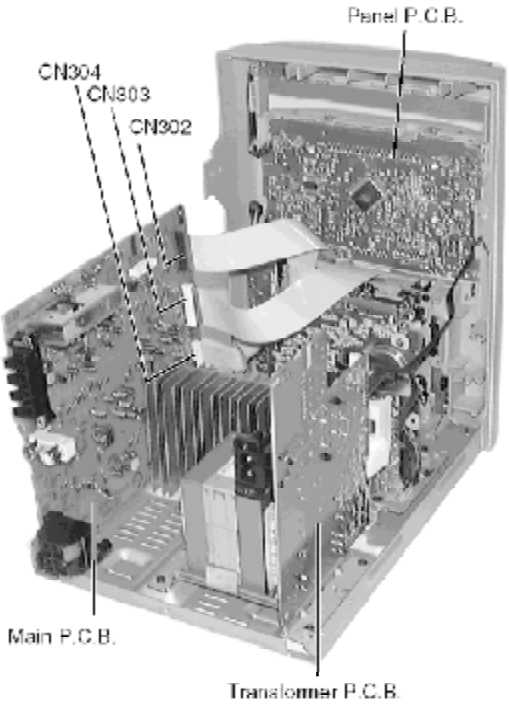

Outer side
Optical pickup
Gear
Marking "◀"
※ Rotate the gear to move the side A of optical pickup toward the outer edge from the marking "◀".
Side A

2. Replacement of the Power Amplifier IC

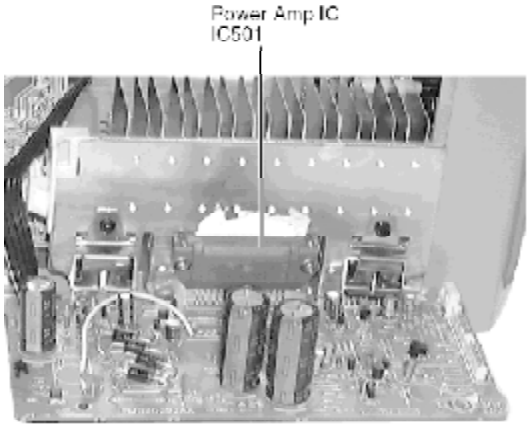
Step 1 Follow the procedures in 'Checking Procedure for each major P.C.B.' (Step 1 - Step 6).



Step 2 Remove the wires at CN302, CN303 and CN304 and pull out the Main P.C.B.



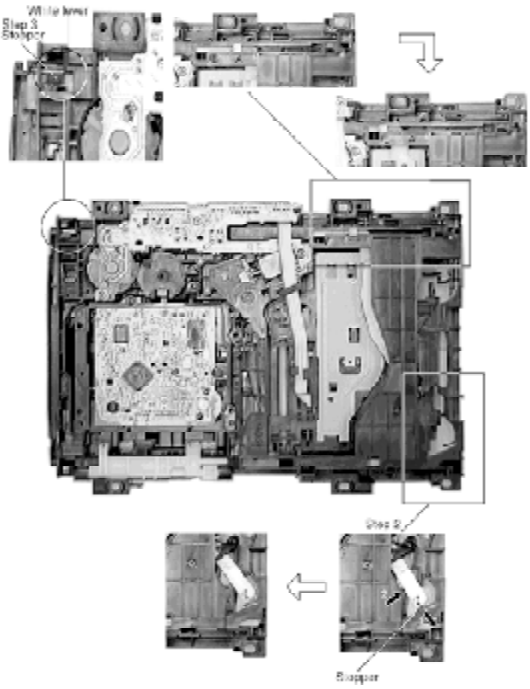
Step 3 Remove 2 screws fixed to the Power Amplifier IC.



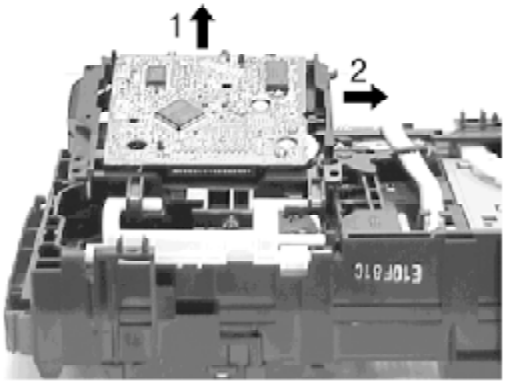
Step 4 Unsolder the terminals of Power Amp IC and replace the respective component.

8.3. Disassembly and assembly of the Traverse Unit

Step 1 Push the lever from position A to B.
Step 2 Pull the stopper (black) in the direction of arrow 1 and push the lever in the direction of arrow 2.
Step 3 Push the stpeer (black) down until the white lever eject out.



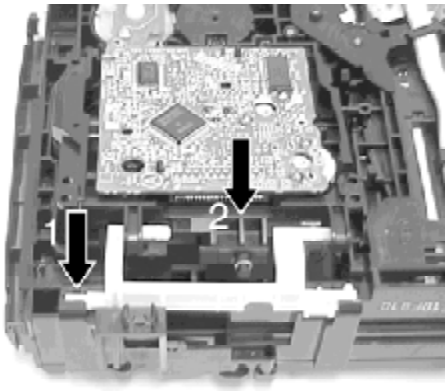
Step 4 Lift up the traverse unit and slide out the unit as shown.



- Replacement of Traverse Unit

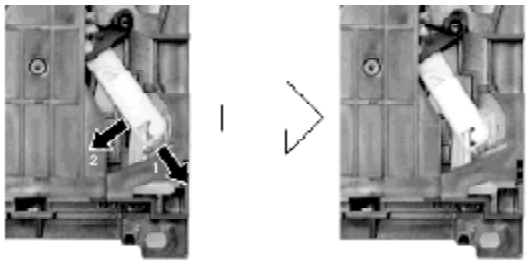
Step 1 Place the traverse unit as shown.

Step 2 Press in the lever shaft in the direction of arrow 1 as shown and push the traverse unit into the position in the direction of arrow 2.



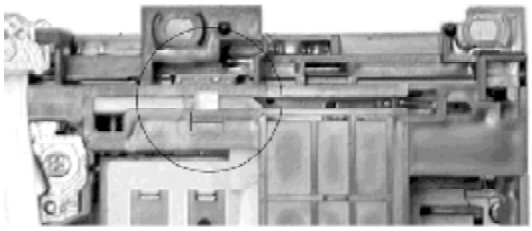
Step 3 Pull the stopper in the direction of arrow 1 and release the lever in the direction of arrow

2 as shown.

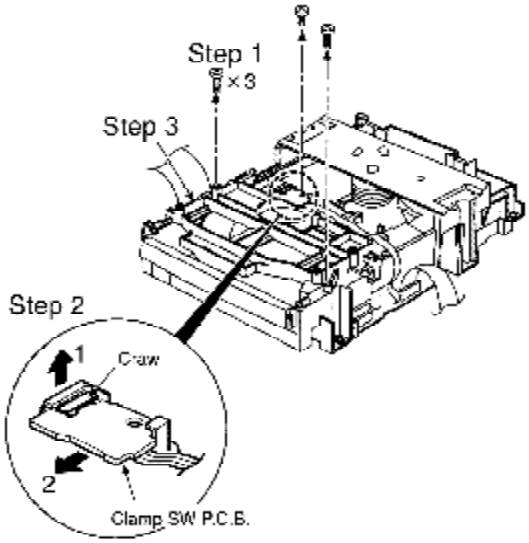


Step 4 Pull out the tray half way and push it back fully.

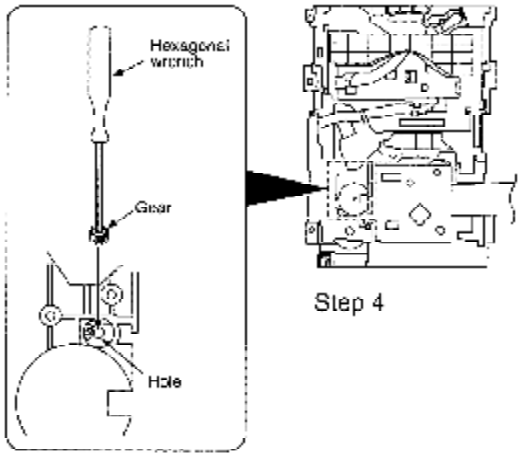
Step 5 Push the lever to the initial position indicated 'I---I'.



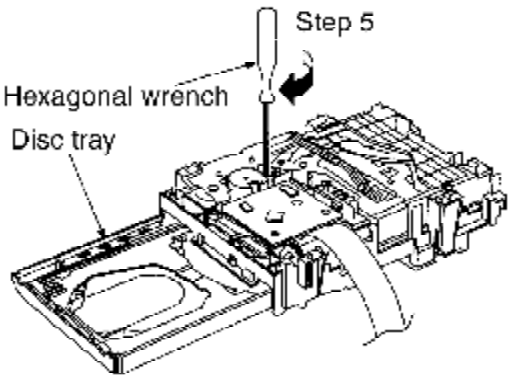
8.4. Disassembly and assembly of the Disc Tray



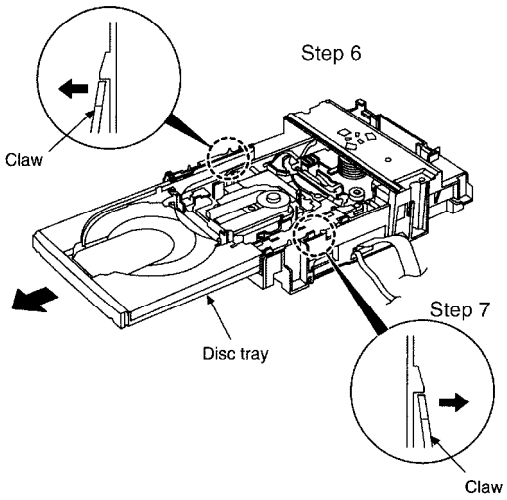
Step 2 With lifting the claw in the direction of arrow 1, draw the clamp SW P.C.B. in the direction of arrow 2.
Step 3 Remove the mechanism cover.



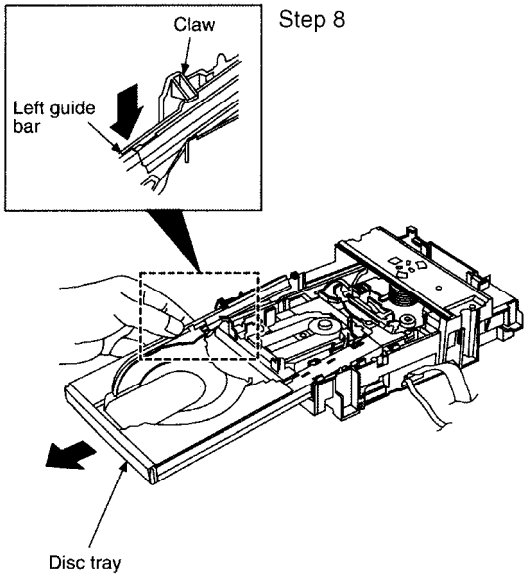
Step 4 Insert the gear with hexagonal wrench into the hole.



Step 5 Rotate the hexagonal wrench in the direction of arrow (clockwise), and then open the disc tray fully.

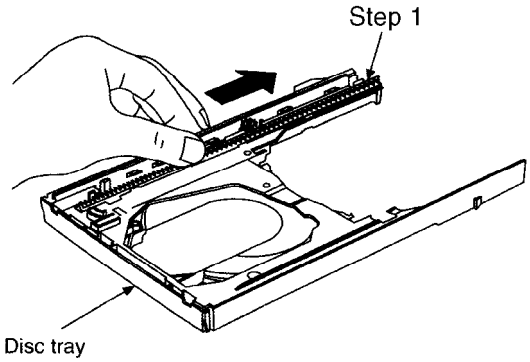


Step 6 Upset the CD changer unit again.
Step 7 Release both the claws, and then draw the disc tray.

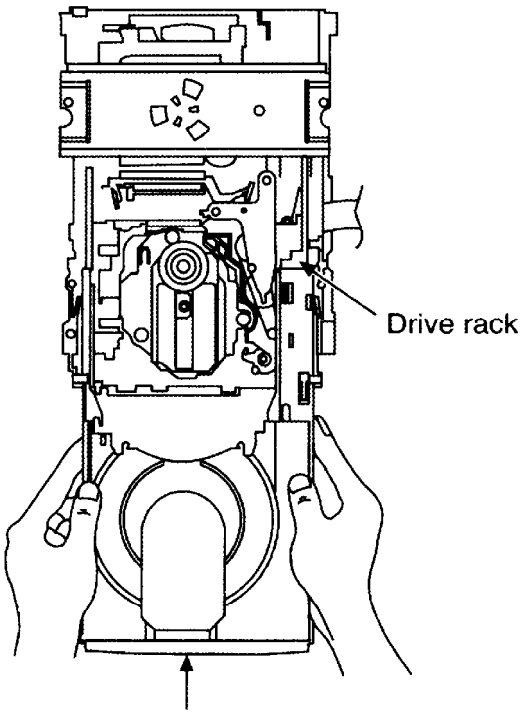


Step 8 With forcing the left guide bar manually because the left guide bar interfers with claw, draw the disc tray.

- Installation of the disc tray after replacement

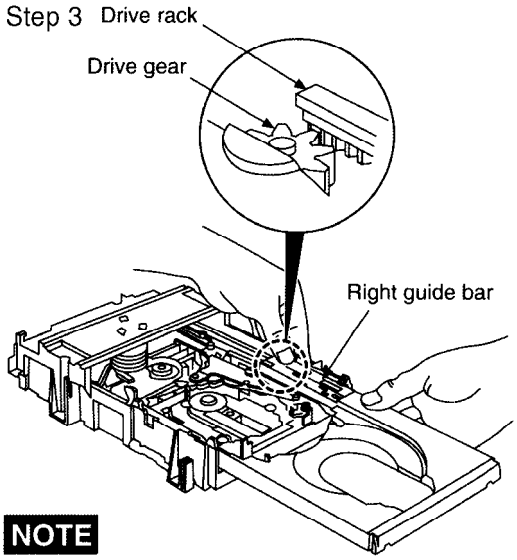


Step 1 Slide the drive rack fully in the direction of arrow.



Step 2

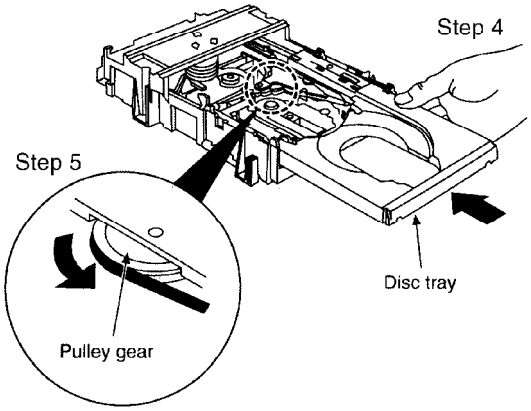
Step 2 Holding the drive rack not to move, install the disc tray.



NOTE

Force the right guide bar of tray base manually not to move upwards.

Step 3 Align the drive rack with the driver gear.



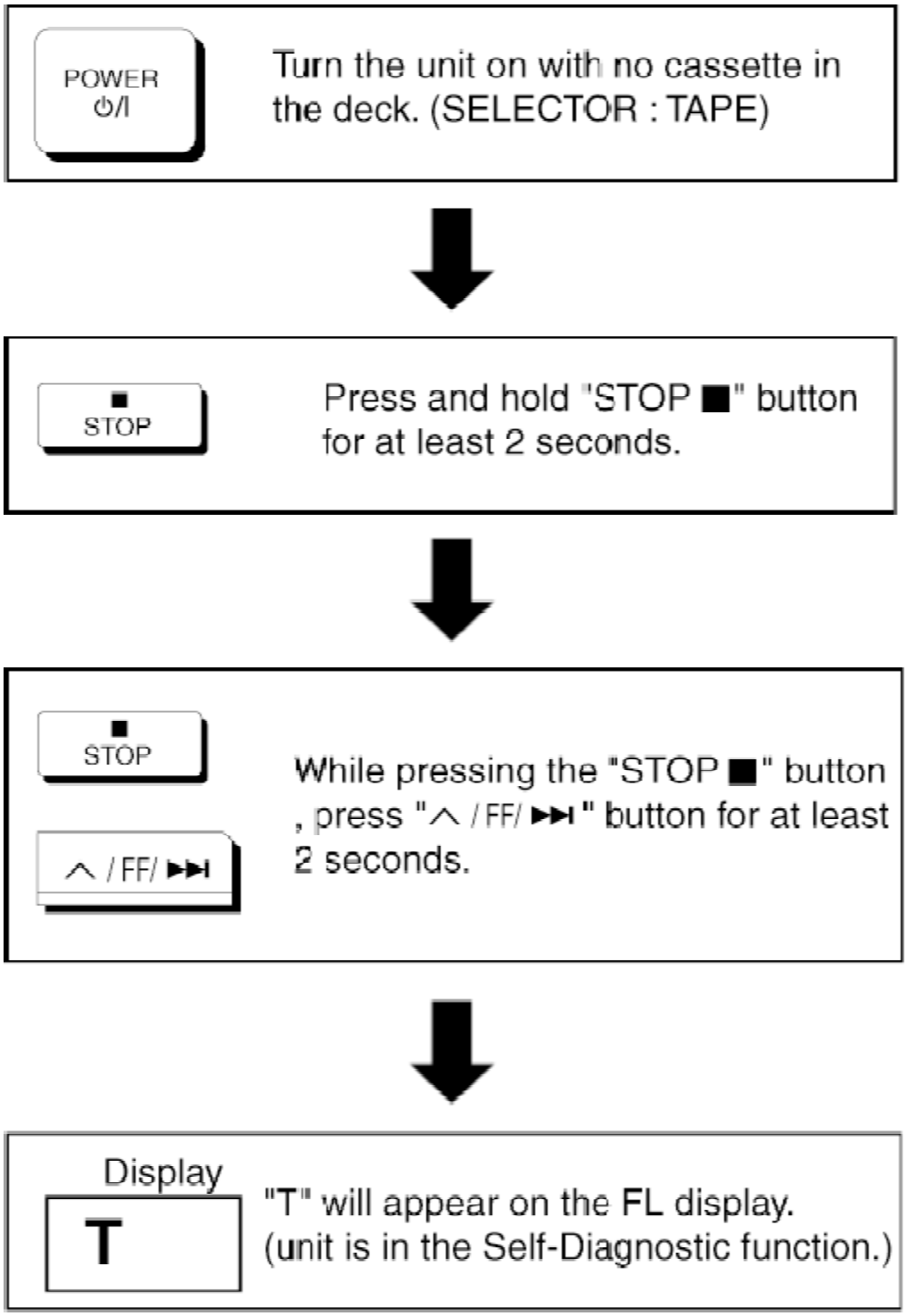
Step 4 Holding the disc tray manually, rotate the pulley gear in the direction of arrow.
Step 5 Rotate the gear 5 or 6 times manually, and then push the disc tray.

9. Self-Diagnostic Function

9.1. Self-diagnostic display

This unit is equipped with a self-diagnostic display function which, if a problems occur, they shall be memorised as errors and there shall be no error display at the time of such occurrence. Error displays shall only be displayed in the self-diagnostic mode. See “How to enter Self Diagnostic Function”.
Use this function when performing maintenance on the unit.

9.2. How to enter the Self-Diagnostic Function


POWER
Turn the unit on with no cassette in the deck. (SELECTOR : TAPE)
STOP
Press and hold "STOP ■" button for at least 2 seconds.
STOP
FF/
While pressing the "STOP ■" button , press "FF/ ▶▶I" button for at least 2 seconds.
Display
T
"T" will appear on the FL display. (unit is in the Self-Diagnostic function.)

Press "STOP ■ " to indicate error code.

- If several problem exist, error code will change each time when "STOP ■ " is pressed.

9.3. Cassette Mechanism Test (For error code H01, H02, H03, F01, F02)

1. Load a cassette tape with the erasure prevention tab, remove from left side only and close the cassette holder.
2. Press “FAST FORWARD” (Tape will be stop after 2 seconds)
3. Load a cassette tape with the erasure prevention tab, remove from right side only and close the cassette holder.
4. Press “REVERSE” (Tape will be stop after 2 seconds)
5. Load a pre-recorded tape with both side record tabs intact and close the cassette holder.
6. Press “PLAY” (After TPS function, tape will stop automatically)
7. Press “REC/PAUSE” (Tape will not move)
8. Press “STOP ■ ” to indicate Error code.

   - If several problem exist, error code will change each time when “STOP ■ ” is pressed.
   (e.g. H01 → H02 → H03 .....etc.)

9.4. To clear all Error code

1. Press “STOP/TUNE MODE” button for 5 seconds.
2. FL indicator shows “CLEAR” for 1 second and change to “T”.

9.5. How to get out from Self-Diagnostic function

1. Press “Power” button OFF.

9.6. Power Amplifier Failure (F61)

1. When power amplifier fail, F61 will indicate automatically.

10. Description of Error Code

10.1. Error detection for Cassette Mechanism block

No.	Error	Error Display	Problem condition
1	MODE SW detection error	H01	Faulty operation of cassette mechanism. Faulty contact or short-circuit of mechanism mo switch (S951, S971).
2	REC INH SW detection error	H02	Recording not possible. Faulty contact or short-circuit of REC INH switch (S974, S975).
3	HALF SW detection error	H03	Playback cannot perform. Faulty contact or short-circuit of HALF siwtch (S S972).
4	Reel Pulse detection error	F01	The tape advances slightly and then stops. Faulty reel pulse, faulty hole detect IC (IC951, IC
5	TPS abnormal	F02	Cassette deck will not perform TPS function. Faulty playback EQ/recording amplifier IC (IC101

10.2. Error detection for CD/Changer block

No.	Error	Error Display	Problem condition
1	REST SW detection error	F15	CD does not function. This error occurs when the Optical Pick Up RES (S701) is not detected within the specified time (about 8 seco
2	CD tray opens automatically	F16	CLAMP switch (S4) NG (Check & Replace)
3	Does not startup when [PLAY] button is pressed	F17	BOTTOM switch (S5) NG (Check & Replace)
4	Transmission error between CD servo LSI and micon	F26	CD does not function. This error occurs when the POWER is ON for th block and an error is detected after the transmission has started.
5	Startup fails even when you insert CD or the selected disc tray does not open	F27	Tray 1 detect switch or Tray 2 detect switch NG & Replace)
6	Cannot insert CD	F28	Tray 1 detect switch NG (Check & Replace)
7	Cannot eject CD	F29	Check if disc is stuck. Tray 2 detect switch NG (Confirm & Replace)
8	The CD tray closes	H15	CD disc tray detect switch NG (S3) (Check & Rep

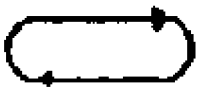
10.3. Power Supply related error detection

No.	Error	Error Display	Problem condition
1	POWER AMP output abnormal	F61	When POWER is switched on, power become off automatically. During normal operation, if DC DET become L, P shall become L and the error display on the left shall be displa (IC501)

11. Measurements and Adjustments

11.1. Cassette Deck Section

- Measurement Condition

- Reverse-mode selector switch: 
- Tape edit: NORMAL
- Record timer: OFF
- Make sure head, capstan and press roller are clean.
- Judgeable room temperature 20 ± 5 °C (68 ± 9°F)
- Measuring instrument
- EVM (Electronic Volmeter)
- Digital quency counter
- Test Tape
- Head azimuth adjustment (8 kHz, -20 dB); QZZCFM
- Tape speed gain adjustment (3 kHz, -10 dB); QZZCWAT
- Playback gain adjustment (315 Hz, 0 dB); QZZCFM
- CrO2 tape, QZZCRX

11.1.1. Head Azimuth Adjustment

Note :

If you wish to readjust the head azimuth, be sure to adjust with adhering the casette tape closely to the mechanism by pushing the cebter of cassette tape with your finger. (Shown in Fig. 1)

1. Connect the measuring instrument as shown in Fig. 2.
2. Replace azimuth screws for both forward and reverse direction after removing the screw-locking bond left on the head base.
3. Playback the azimuth adjustment portion(8kHz, -20dB) of test tape(QZZCFM). Adjust the azimuth adjusting screw until the outputs of the L/Rch are maximized. (Refer to Fig. 3)

Make sure that the difference in the peak level between the left and right channels does not exceed 5dB.

4. **Perform the same adjustment in reverse playback mode. Check of the level difference forward and reverse directions**
5. **Playback the playback gain adjustment portion(315Hz, 0dB) of test tape(QZZCFM). Check if level difference between forward and reverse direction is within 1.5dB.**
6. **After the adjustment, apply screwlock to the azimuth adjusting screw.**

Fig. 1

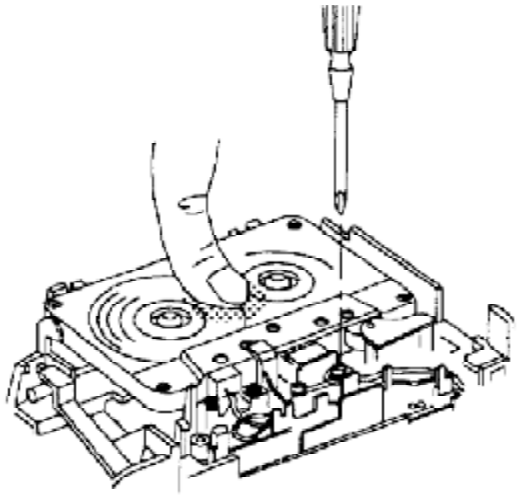


Fig. 2

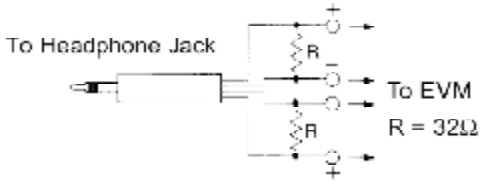
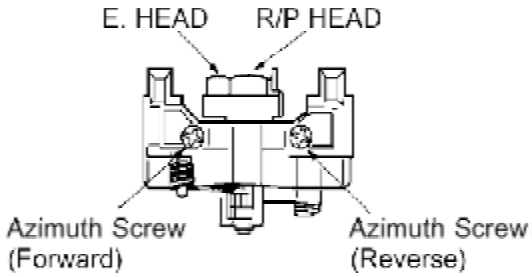


Fig. 3



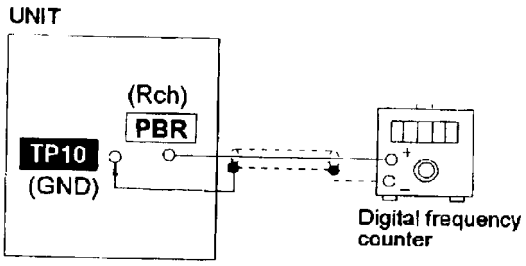
11.1.2. Tape Speed Adjustment (Deck 1/2)

1. **Set the tape edit button to “NORMAL” position.**

2. Insert the test tape (QZZCWAT) to DECK and playback (FWD side) the middle portion of it.
3. Adjust Motor VR for the output value shown below.

Adjustment target: 2940 ~ 3060 Hz (NORMAL speed)

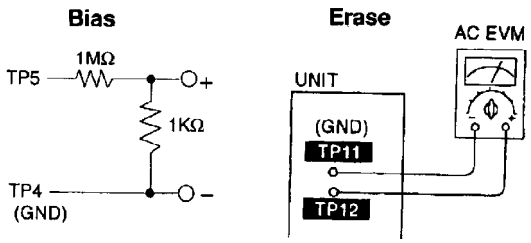
4. After alignment, assure that the output frequency of the DECK REV is within ±60 Hz respectively of the value of the output frequency of DECK FWD.



11.1.3. Bias and Erase Voltage Check

1. Set the unit “AUX” position.
2. Insert the Normal blank tape (QZZCRA) into DECK and the unit to “REC” mode (use “ ■ REC/PAUSE” key).
3. Measure and make sure that the output is within the standard value.
4. Insert the Cr02 tape(QZZCRX).
5. Repeat steps 2 and 3.

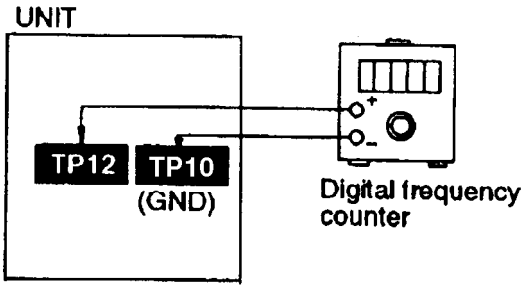
Bias voltage	14 ± 4mV (Normal)
	17 ± 5mV (Cr02)
Erase voltage for Deck 2	more than 80mV (Normal)
	more than 90mV (Cr02)



11.1.4. Bias Frequency Adjustment

1. Set the unit to “AUX” position.
2. Insert the Normal blank tape (QZZCRA) into DECK 2 and set the unit to “REC” mode (■ use “REC/PAUSE” key).
3. Adjust L1301 so that the output frequency is within the standard value.

Standard Value: 97 ±8 kHz



11.2. Tuner Section

11.2.1. AM-IF Alignment

- AM-IF ALIGNMENT

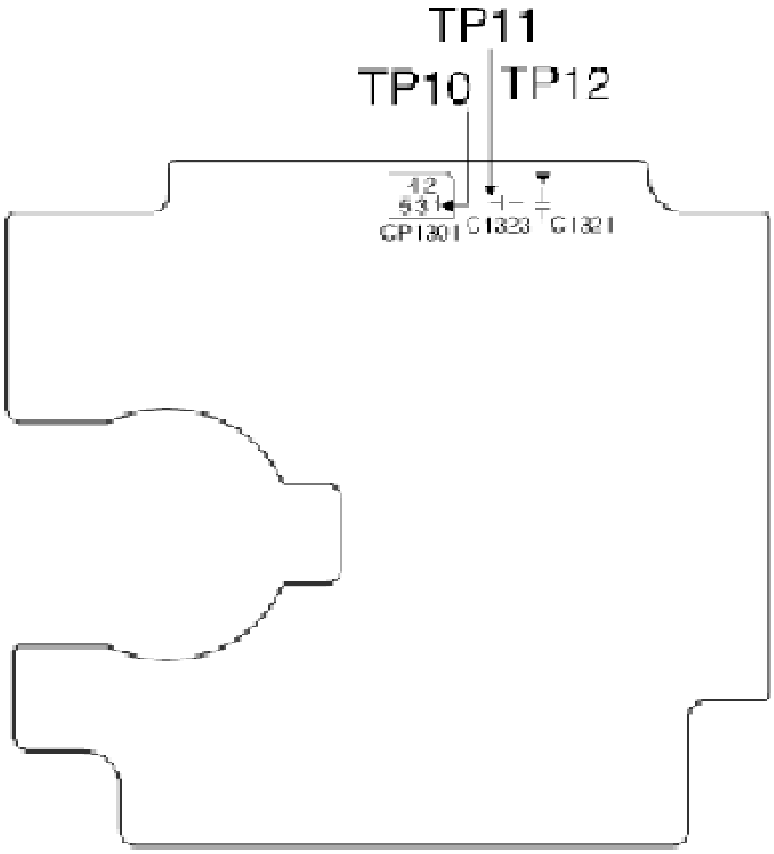
SIGNAL GENERATOR OR SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER OSCILLOSCOPE)	ADJUSTMENT(Shown in Fig.3)	RE
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate signal into loop of receiver.	450 kHz 30% Mod. at 400Hz.	Point of non-interference (on/ about 600 kHz)	Headphone Jack (32 Ω) Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.	Z102 (AM IFT)	Adju maxi outp

- AM-RF ALIGNMENT

SIGNAL GENERATOR OR SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER OSCILLOSCOPE)	ADJUSTMENT(Shown in Fig.1)	RE
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate signal into loop of receiver.	520 kHz	Tuning capacitor fully closed.	Headphone Jack (32 Ω) Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.	Z101 (AM OSC Coil)	Adju maxi outp
Fashion a loop of several turns of wire and radiate signal into loop of receiver.	600 kHz	Tuning capacitor fully open.	Headphone Jack (32 Ω) Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.	Z101 (AM ANT Coil)	Adju maxi outp

11.3. Alignment Points

Cassette Deck Section



Tuner Section

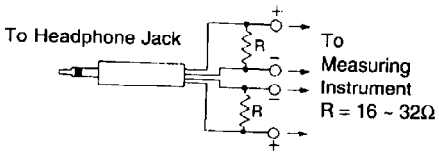


Fig. 2

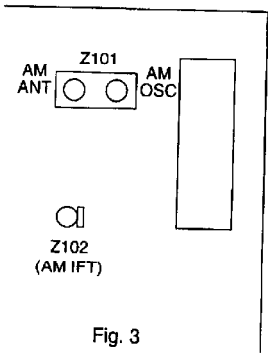
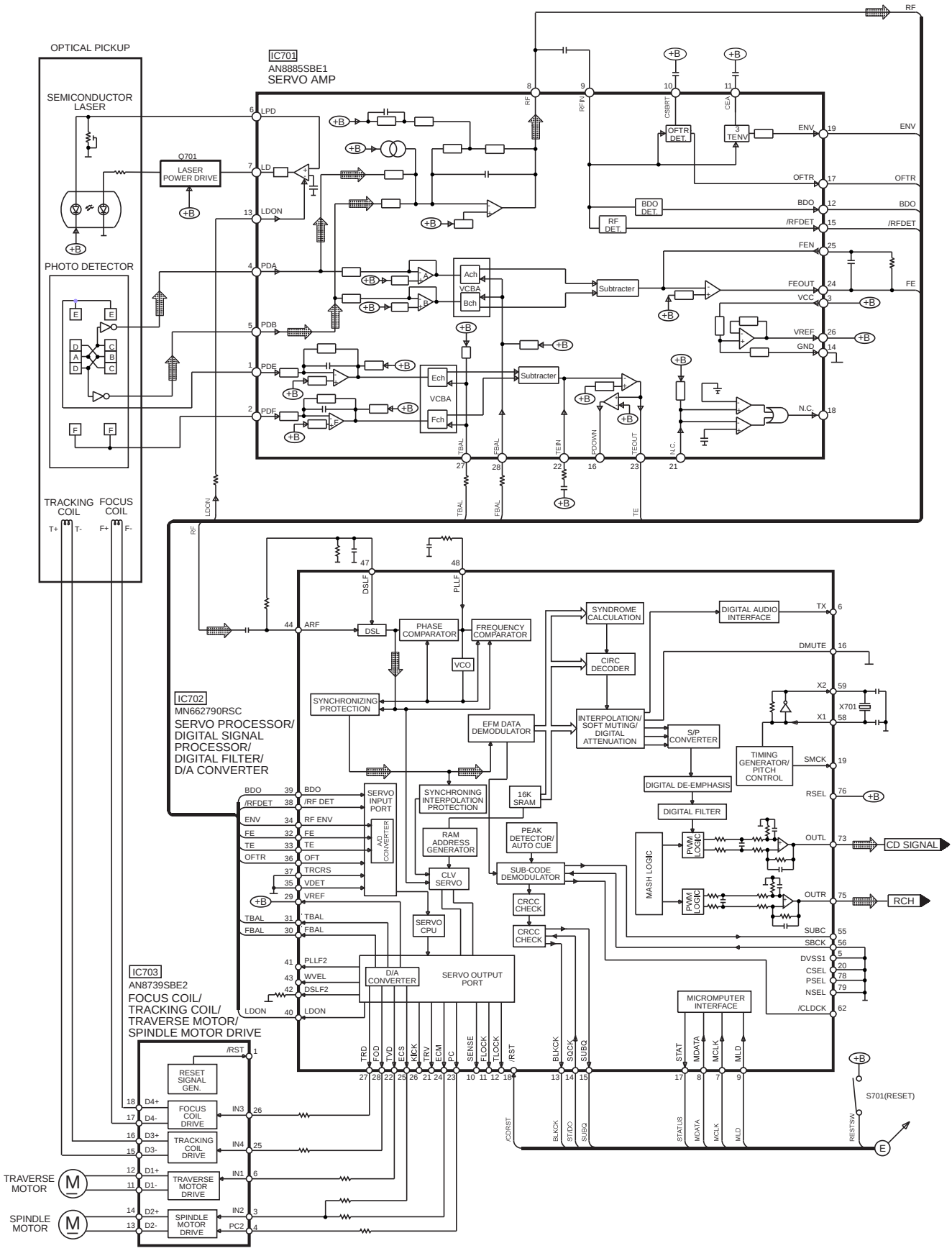


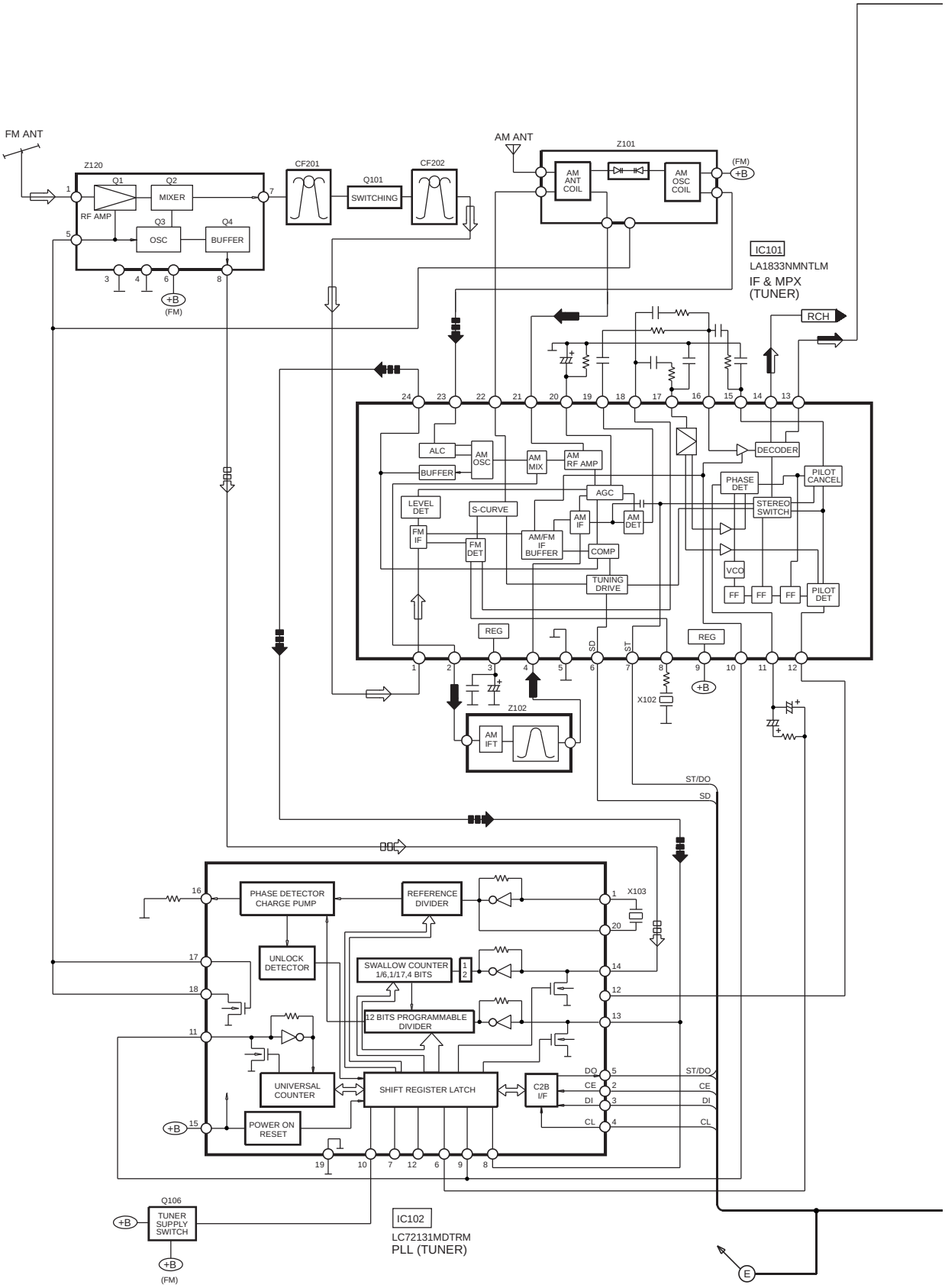
Fig. 3

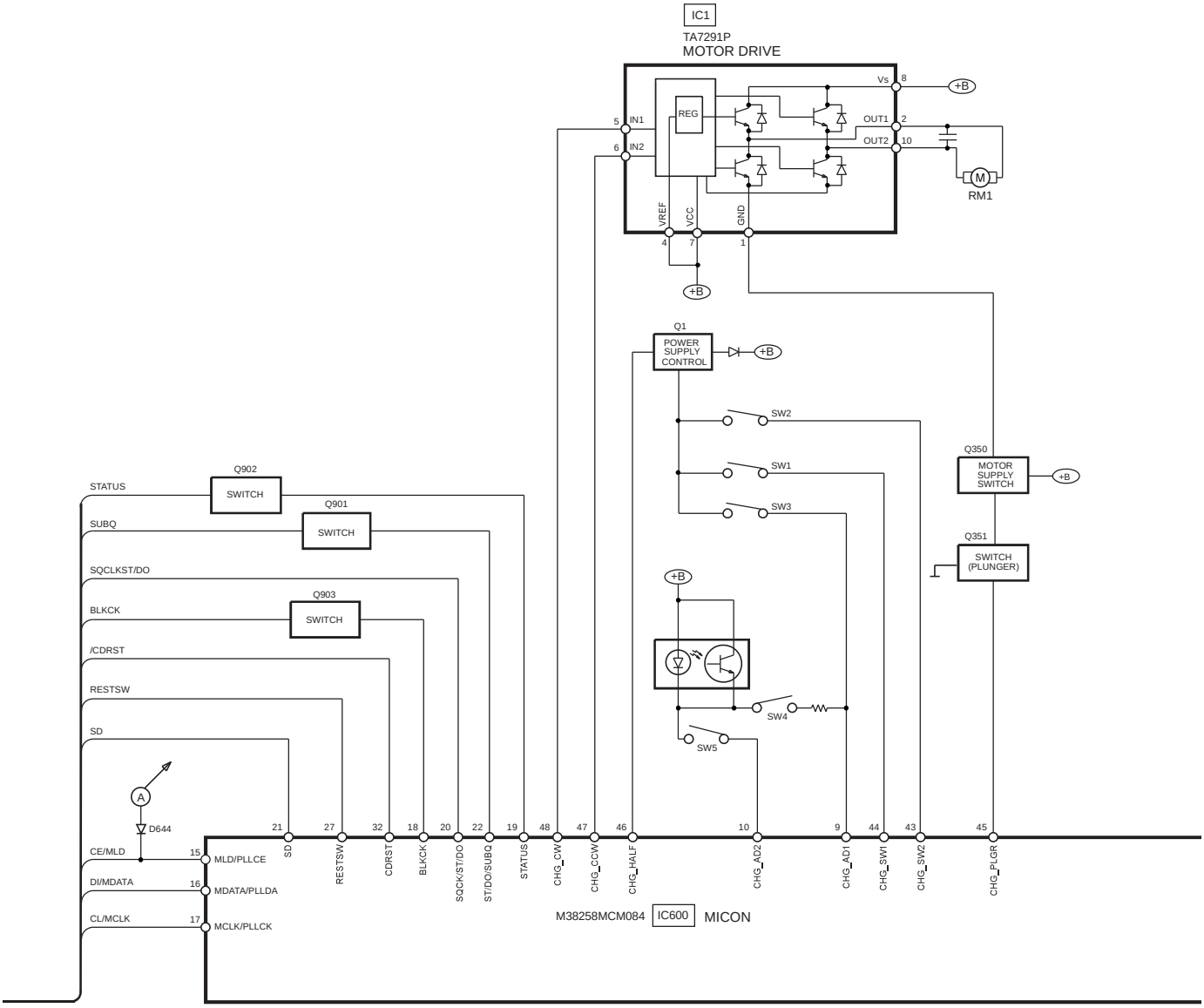
12. Illustration of IC's, Transistors and Diodes

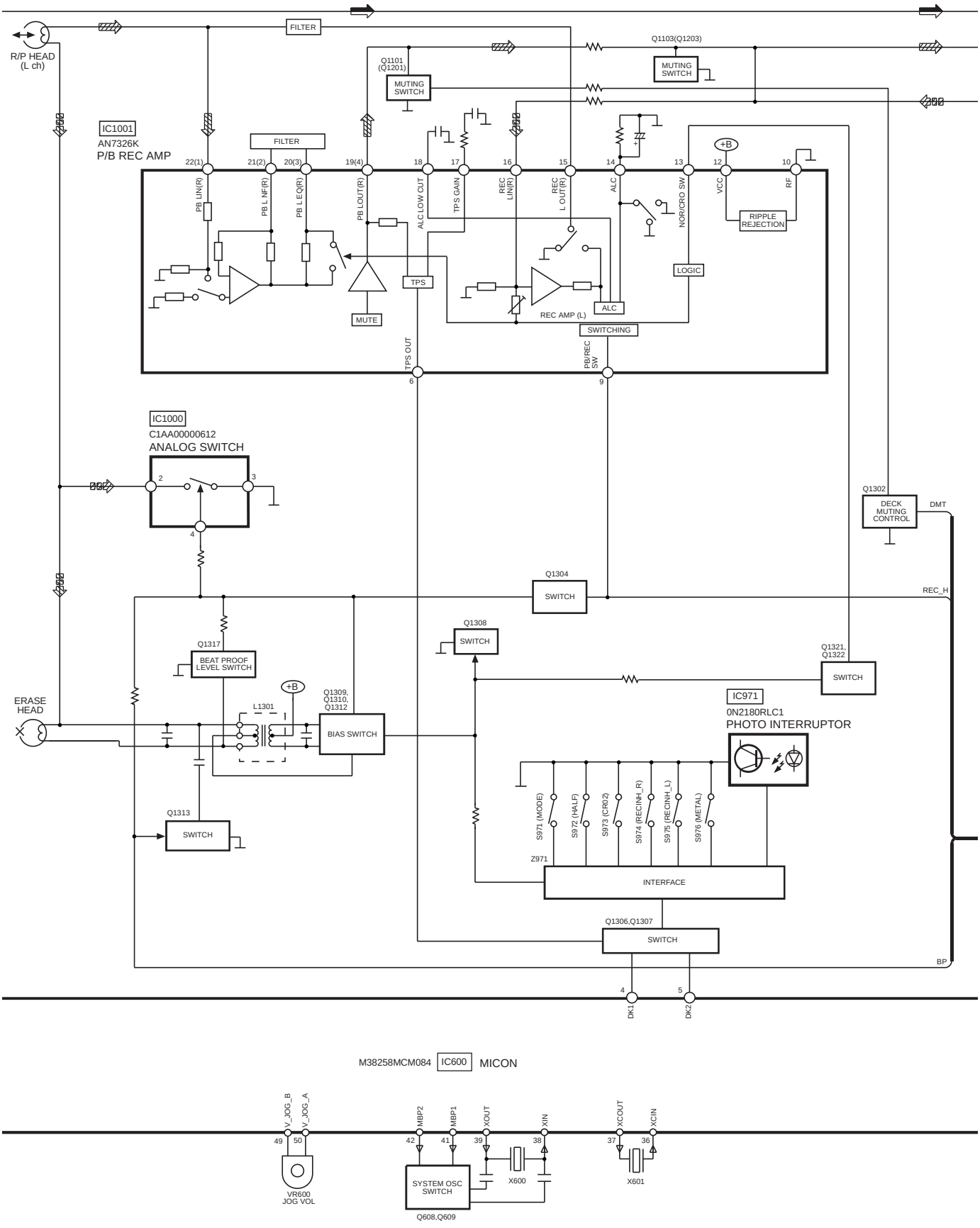
13. Terminal Function of IC's

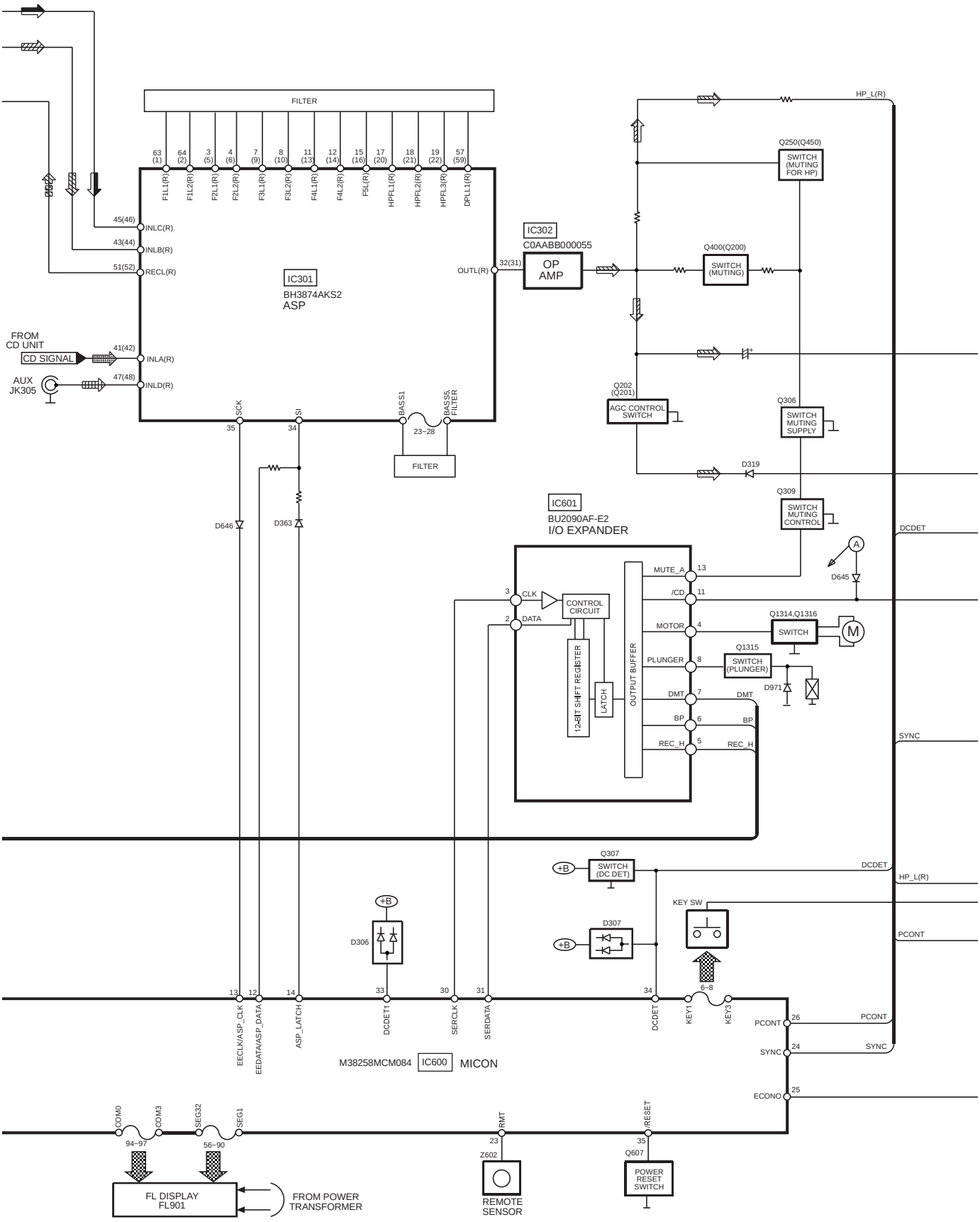
13.1. IC701 (AN8885NSBE1) Servo Amplifier


OPTICAL PICKUP
SEMICONDUCTOR LASER
PHOTO DETECTOR
TRACKING COIL
FOCUS COIL
IC701
AN8885SBE1
SERVO AMP
LASER POWER DRIVE
Q701
Ach
Bch
Ech
Fch
VCBA
Subtracter
OFTR DET.
3 TENV
BDO DET.
RF DET.
IC702
MN662790RSC
SERVO PROCESSOR/ DIGITAL SIGNAL PROCESSOR/ DIGITAL FILTER/ D/A CONVERTER
PHASE COMPARATOR
FREQUENCY COMPARATOR
VCO
SYNDROME CALCULATION
CIRC DECODER
INTERPOLATION/ SOFT MUTING/ DIGITAL ATTENUATION
DIGITAL AUDIO INTERFACE
S/P CONVERTER
EFM DATA DEMODULATOR
SYNCHRONIZING PROTECTION
SYNCHRONING INTERPOLATION PROTECTION
16K SRAM
RAM ADDRESS GENERATOR
PEAK DETECTOR/ AUTO CUE
SUB-CODE DEMODULATOR
CRCC CHECK
CLV SERVO
SERVO CPU
SERVO INPUT PORT
A/D CONVERTER
D/A CONVERTER
SERVO OUTPUT PORT
TIMING GENERATOR/ PITCH CONTROL
DIGITAL DE-EMPHASIS
DIGITAL FILTER
MASH LOGIC
PWM LOGIC
MICROMPUTER INTERFACE
IC703
AN8739SBE2
FOCUS COIL/ TRACKING COIL/ TRAVERSE MOTOR/ SPINDLE MOTOR DRIVE
RESET SIGNAL GEN.
FOCUS COIL DRIVE
TRACKING COIL DRIVE
TRAVERSE MOTOR DRIVE
SPINDLE MOTOR DRIVE
TRAVERSE MOTOR
SPINDLE MOTOR
CD SIGNAL
RCH
S701(RESET)


FM ANT
AM ANT
Z120
Q1
Q2
MIXER
RF AMP
Q3
Q4
OSC
BUFFER
CF201
Q101
SWITCHING
CF202
Z101
AM ANT COIL
AM OSC COIL
(FM)
+B
IC101
LA1833NMNTLM
IF & MPX
(TUNER)
RCH
ALC
AM OSC
BUFFER
AM MIX
AM RF AMP
DECODER
PHASE DET
PILOT CANCEL
AGC
LEVEL DET
S-CURVE
AM IF
AM DET
STEREO SWITCH
FM IF
FM DET
AM/FM IF BUFFER
COMP
VCO
TUNING DRIVE
FF
PILOT DET
REG
SD
ST
X102
Z102
AM IFT
ST/DO
PHASE DETECTOR CHARGE PUMP
REFERENCE DIVIDER
X103
UNLOCK DETECTOR
SWALLOW COUNTER 1/6,1/17,4 BITS
12 BITS PROGRAMMABLE DIVIDER
UNIVERSAL COUNTER
SHIFT REGISTER LATCH
C2B I/F
DO
CE
DI
CL
POWER ON RESET
Q106
TUNER SUPPLY SWITCH
IC102
LC72131MDTRM
PLL (TUNER)
E

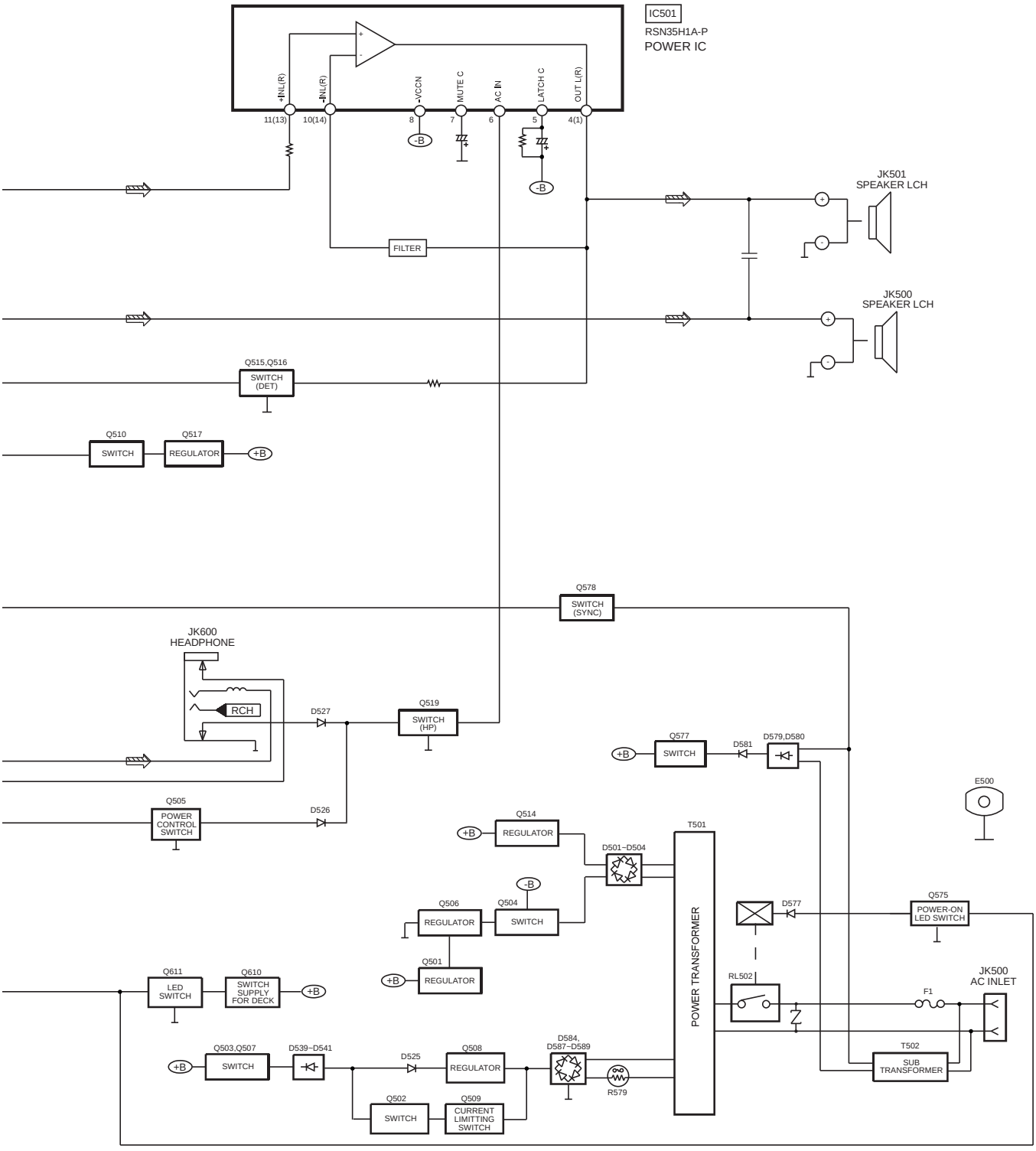

IC1
TA7291P
MOTOR DRIVE
Vs
8
+B
REG
5
IN1
6
IN2
OUT1
2
OUT2
10
M
RM1
VREF
VCC
GND
4
7
1
+B
Q1
POWER SUPPLY CONTROL
+B
SW2
SW1
SW3
Q350
MOTOR SUPPLY SWITCH
+B
Q351
SWITCH (PLUNGER)
+B
SW4
SW5
Q902
SWITCH
Q901
SWITCH
Q903
SWITCH
STATUS
SUBQ
SQCLKST/DO
BLKCK
/CDRST
RESTSW
SD
A
D644
CE/MLD
DI/MDATA
CL/MCLK
15
16
17
MLD/PLLCE
MDATA/PLLDA
MCLK/PLLCK
21
27
32
18
20
22
19
48
47
46
10
9
44
43
45
SD
RESTSW
CDRST
BLKCK
SQCK/ST/DO
ST/DO/SUBQ
STATUS
CHG_CW
CHG_CCW
CHG_HALF
CHG_AD2
CHG_AD1
CHG_SW1
CHG_SW2
CHG_PLGR
M38258MCM084
IC600
MICON


R/P HEAD
(L ch)
FILTER
Q1103(Q1203)
MUTING SWITCH
Q1101
(Q1201)
MUTING SWITCH
IC1001
AN7326K
P/B REC AMP
FILTER
+B
22(1)
21(2)
20(3)
19(4)
18
17
16
15
14
13
12
10
PB LIN(R)
PB L NF(R)
PB L EQ(R)
PB LOUT(R)
ALC LOW CUT
TPS GAIN
REC LIN(R)
REC L OUT(R)
ALC
NOR/CRO SW
VCC
RF
RIPPLE REJECTION
LOGIC
TPS
MUTE
ALC
REC AMP (L)
SWITCHING
TPS OUT
6
PB/REC SW
9
IC1000
C1AA00000612
ANALOG SWITCH
2
3
4
Q1302
DECK MUTING CONTROL
DMT
Q1304
SWITCH
REC_H
Q1308
SWITCH
Q1321,
Q1322
SWITCH
Q1317
BEAT PROOF LEVEL SWITCH
+B
Q1309,
Q1310,
Q1312
L1301
BIAS SWITCH
ERASE HEAD
IC971
0N2180RLC1
PHOTO INTERRUPTOR
S971 (MODE)
S972 (HALF)
S973 (CR0/2)
S974 (RECINH_R)
S975 (RECINH_L)
S976 (METAL)
Z971
INTERFACE
Q1313
SWITCH
Q1306,Q1307
SWITCH
BP
4
5
DK1
DK2
M38258MCM084
IC600
MICON
V_JOG_B
V_JOG_A
49
50
VR600
JOG VOL
MBP2
MBP1
XOUT
XIN
42
41
39
38
SYSTEM OSC SWITCH
Q608,Q609
X600
XCOUT
XCIN
37
36
X601

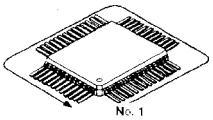

FILTER
63 (1) F1L1(R)
64 (2) F1L2(R)
3 (5) F2L1(R)
4 (6) F2L2(R)
7 (9) F3L1(R)
8 (10) F3L2(R)
11 (13) F4L1(R)
12 (14) F4L2(R)
15 (16) F5L(R)
17 (20) HPFL1(R)
18 (21) HPFL2(R)
19 (22) HPFL3(R)
57 (59) DPLL1(R)
45(46) INLC(R)
43(44) INLB(R)
51(52) RECL(R)
IC301
BH3874AKS2
ASP
FROM CD UNIT
CD SIGNAL
41(42) INLA(R)
AUX JK305
47(48) INLD(R)
SCK 35
SI 34
BASS1
BASS6, FILTER
23~28
FILTER
OUTL(R) 32(31)
IC302
C0AABB000055
OP AMP
HP_L(R)
Q250(Q450)
SWITCH (MUTING FOR HP)
Q400(Q200)
SWITCH (MUTING)
Q202 (Q201)
AGC CONTROL SWITCH
Q306
SWITCH MUTING SUPPLY
D319
Q309
SWITCH MUTING CONTROL
D646
D363
IC601
BU2090AF-E2
I/O EXPANDER
3 CLK
2 DATA
CONTROL CIRCUIT
12-BIT SHIFT REGISTER
LATCH
OUTPUT BUFFER
MUTE_A 13
/CD 11
MOTOR 4
PLUNGER 8
DMT 7
BP 6
REC_H 5
A
D645
Q1314,Q1316
SWITCH
M
Q1315
SWITCH (PLUNGER)
D971
DCDET
SYNC
PCONT
Q307
SWITCH (DC DET)
+B
D307
D306
KEY SW
6~8
13 EECLK/ASP_CLK
12 EEDATA/ASP_DATA
14 ASP_LATCH
33 DCDET1
30 SERCLK
31 SERDATA
34 DCDET
KEY1
KEY3
PCONT 26
SYNC 24
ECONO 25
M38258MCM084 IC600 MICON
COM0
COM3
SEG32
SEG1
94~97
56~90
FL DISPLAY FL901
FROM POWER TRANSFORMER
RMT 23
Z602
REMOTE SENSOR
RESET 35
Q607
POWER RESET SWITCH

SIGNAL LINES

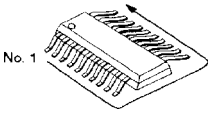
MAIN SIGNAL LINE	CD SIGNAL LINE	AM SIGNAL LINE	PLAYBACK SIGNAL LINE
FM OSC SIGNAL LINE	AM OSC SIGNAL LINE	FM & AM SIGNALS LINE	RECORD SIGNAL LINE
FM SIGNAL LINE	AUX SIGNAL LINE		



M3825MCM084 (100P)
MN662790RSC (80P)
BH3874AKS2 (64P)



BU2090AF-E2 (16P)
LA1833NMNTLM (24P)
LC72131MDTRM (20P)
AN8885SBE1 (28P)



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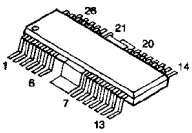

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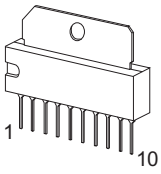

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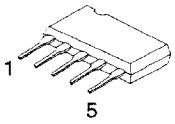

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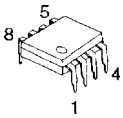

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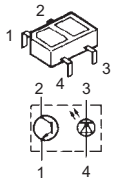

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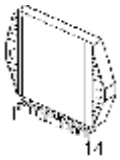

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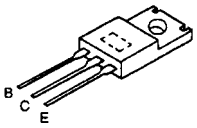
KTA1046



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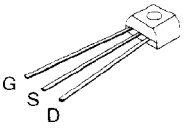

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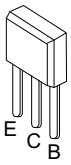

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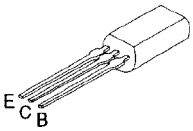

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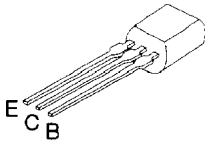

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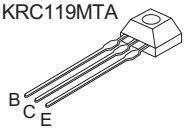

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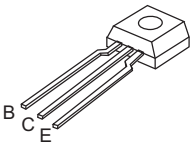

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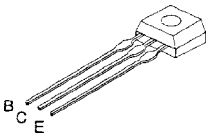

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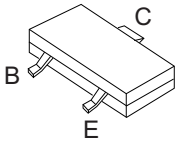

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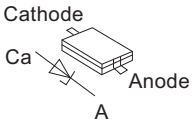

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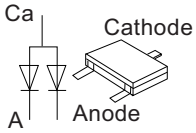

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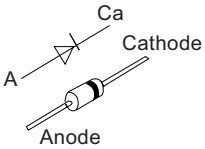

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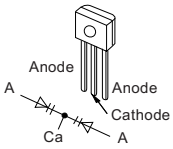

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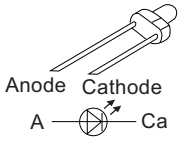

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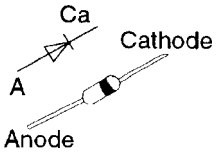

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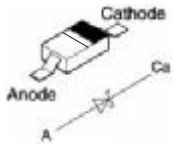

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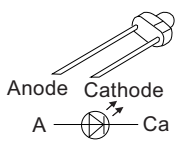

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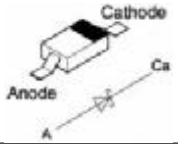
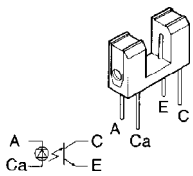


GP1S94



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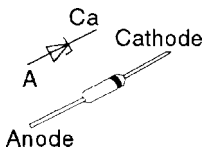
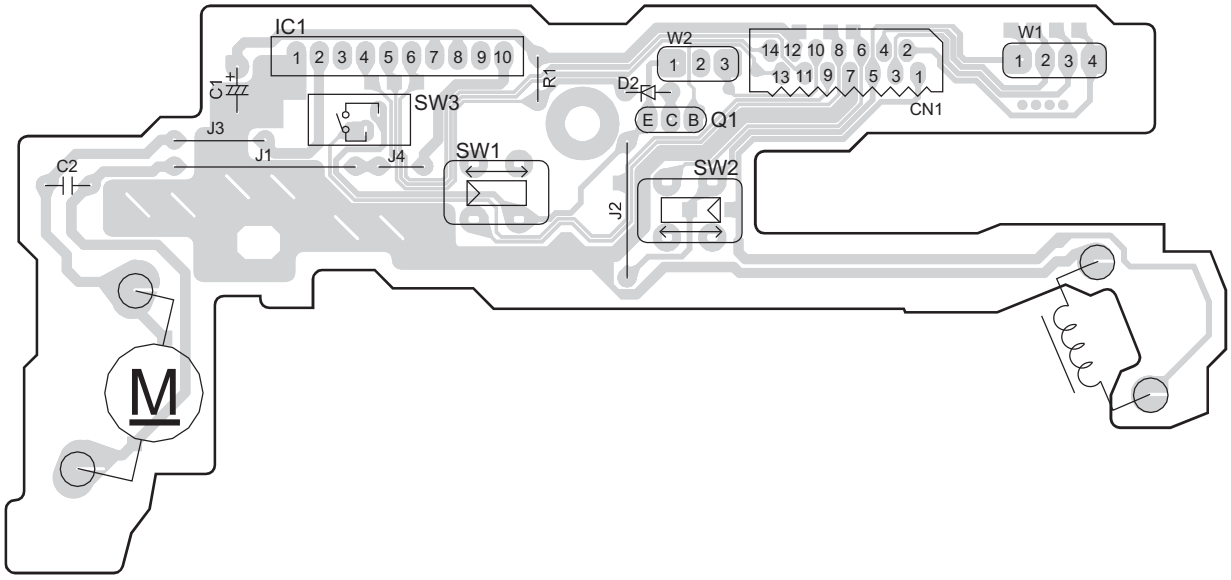
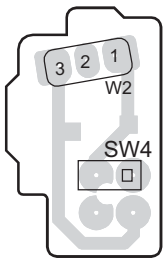


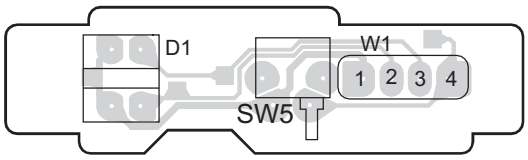
J MOTOR P.C.B (REP2578A-N)



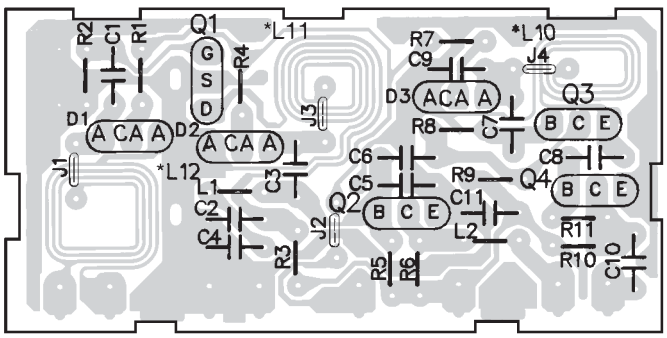
K CD DETECT P.C.B (REP2578A-N)



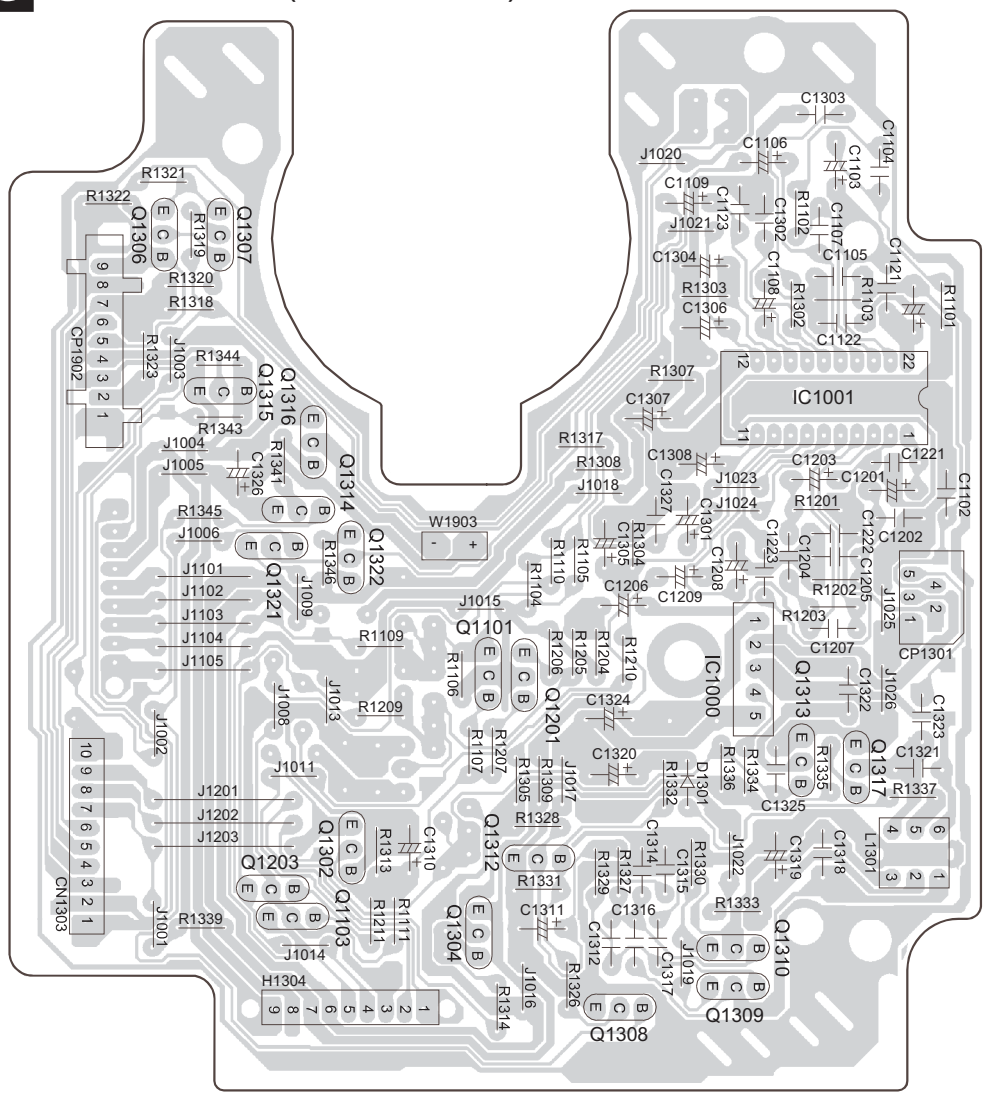
L SPINDLE POSITION P.C.B (REP2578A-N)



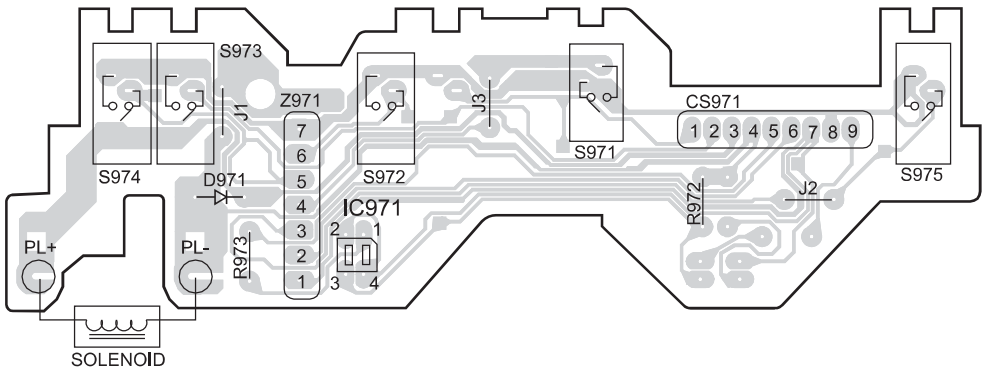
I TUNER PACK P.C.B (REP1999B)



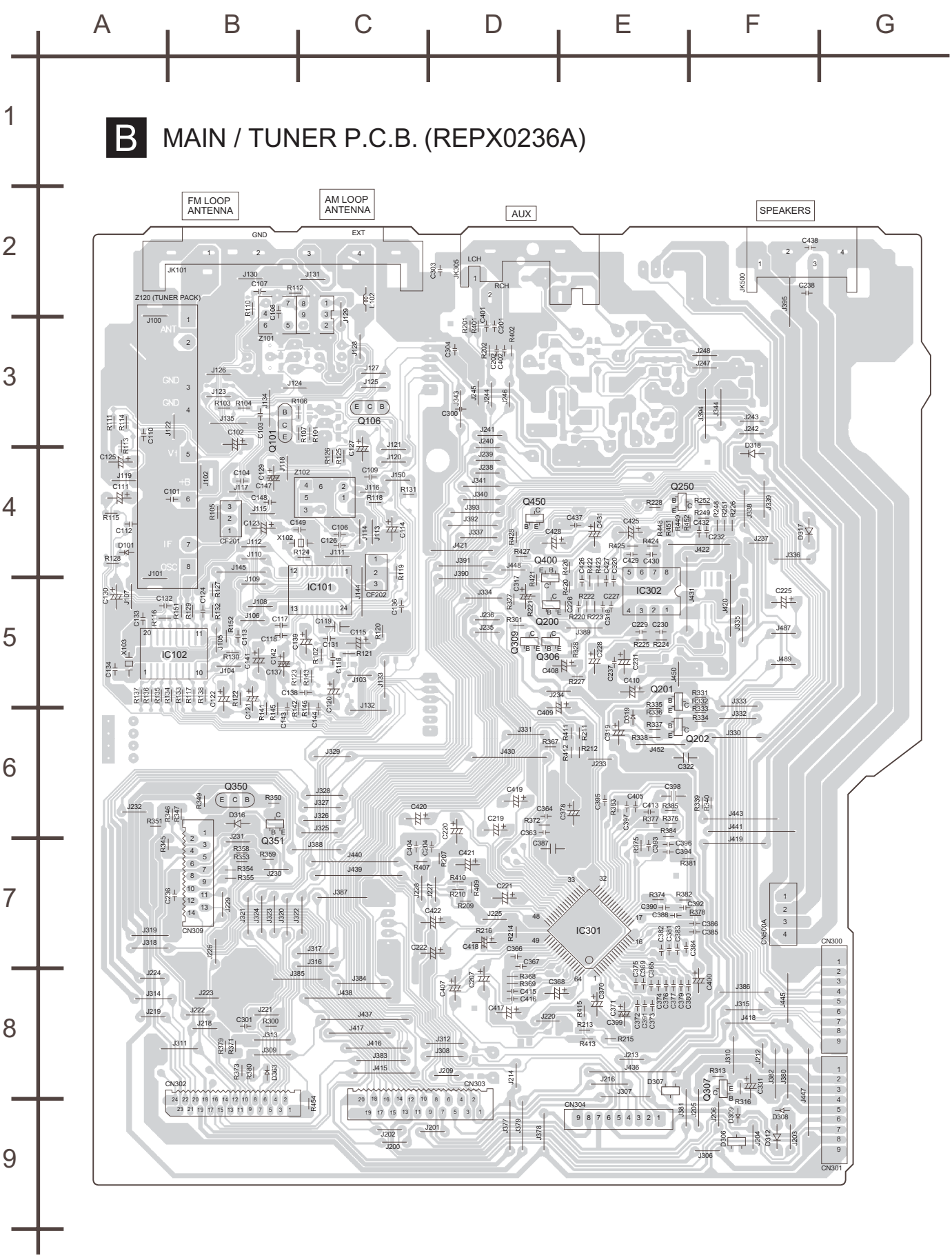
G DECK P.C.B. (REPX0240A)



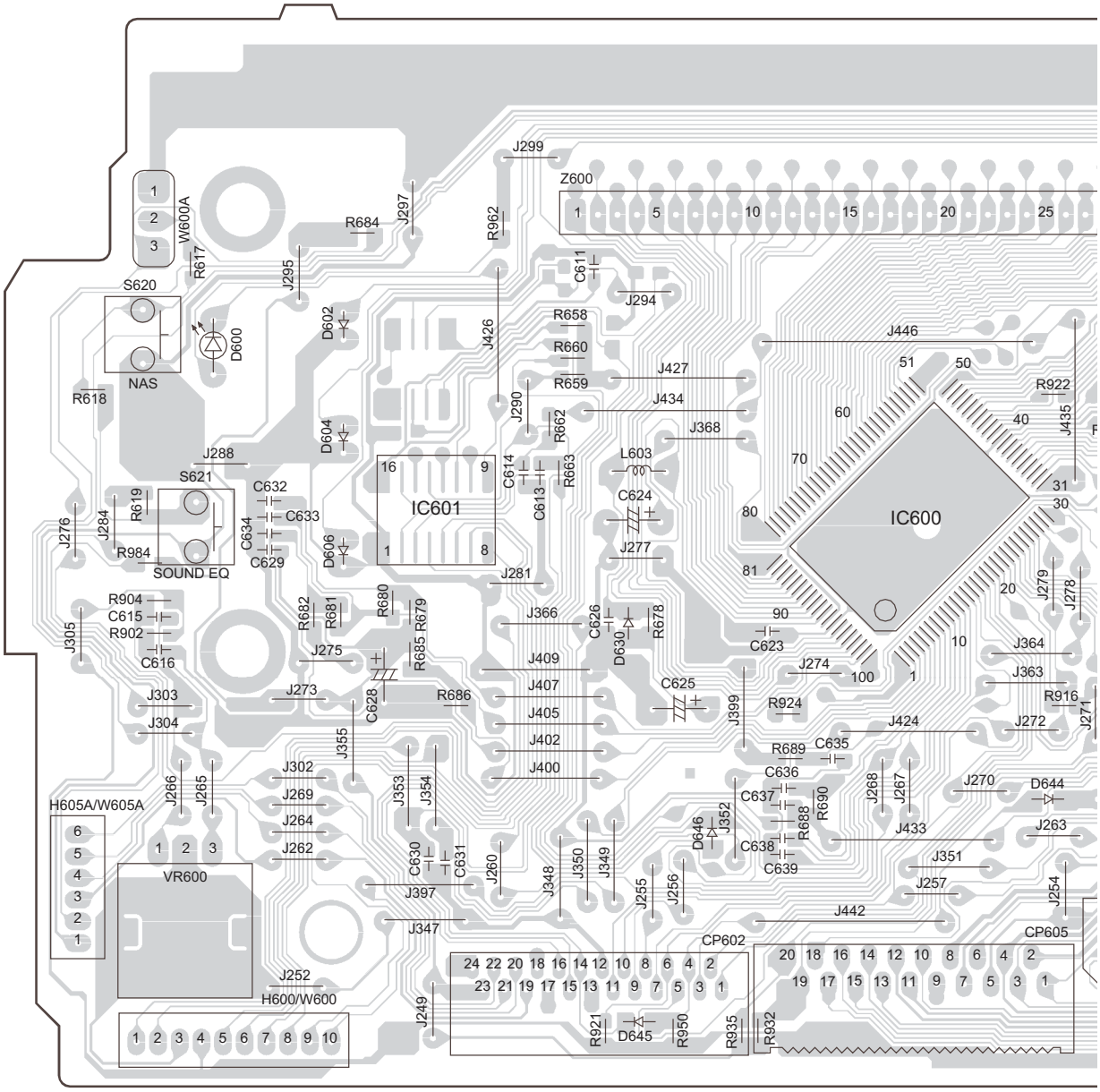
H DECK MECHANISM P.C.B. (REPX0108)



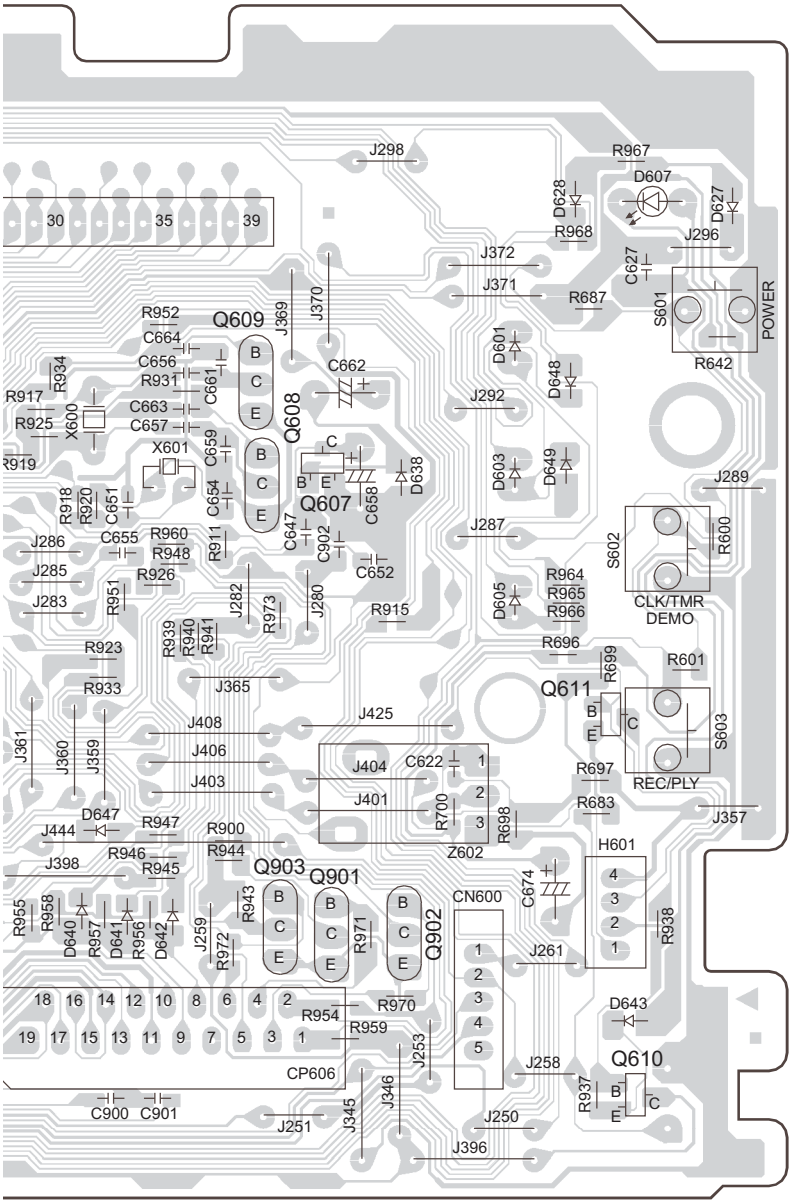
B MAIN / TUNER P.C.B. (REPX0236A)



C PANEL P.C.B. (REPX0236A)



G H I J K L M


J298
R967
D607
D628
R968
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J372
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C627
S601
POWER
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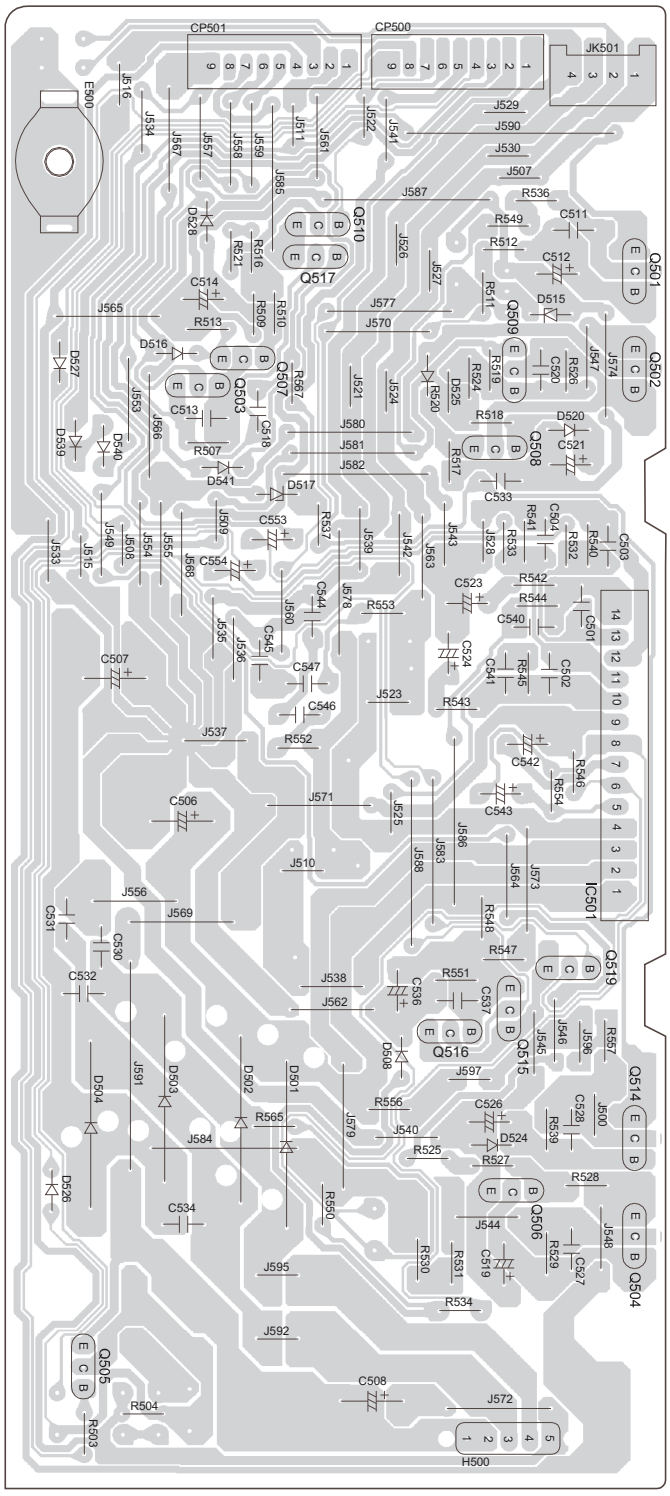
C656
R931
C661
Q609
J369
J370
C662
D601
D648
R934
R917
C663
C657
X600
R925
J292
X601
C659
D603
D649
J289
R918
R920
C651
C654
Q607
C658
D638
C647
C902
J287
S602
R600
J286
C655
R960
R948
R911
C652
R964
R965
R966
CLK/TMR
DEMO
J285
R926
J283
R951
J282
R973
J280
R915
D605
R939
R940
R941
R696
R699
R601
R923
J365
Q611
R933
J425
J408
S603
J361
J360
J359
J406
J404
C622
J403
J401
R700
R697
REC/PLY
R683
D647
J444
R947
R900
R944
R698
J357
R946
Z602
H601
J398
R945
Q903
Q901
C674
R955
R958
R943
CN600
Q902
D640
R957
D641
R956
D642
J259
R972
R971
R938
J261
18 16 14 12 10 8 6 4 2
19 17 15 13 11 9 7 5 3 1
R954
R970
R959
D643
J253
J258
Q610
CP606
R937
C900 C901
J346
J345
J251
J250
J396

A B C D E F G

1 2 3 4 5 6 7 8 9

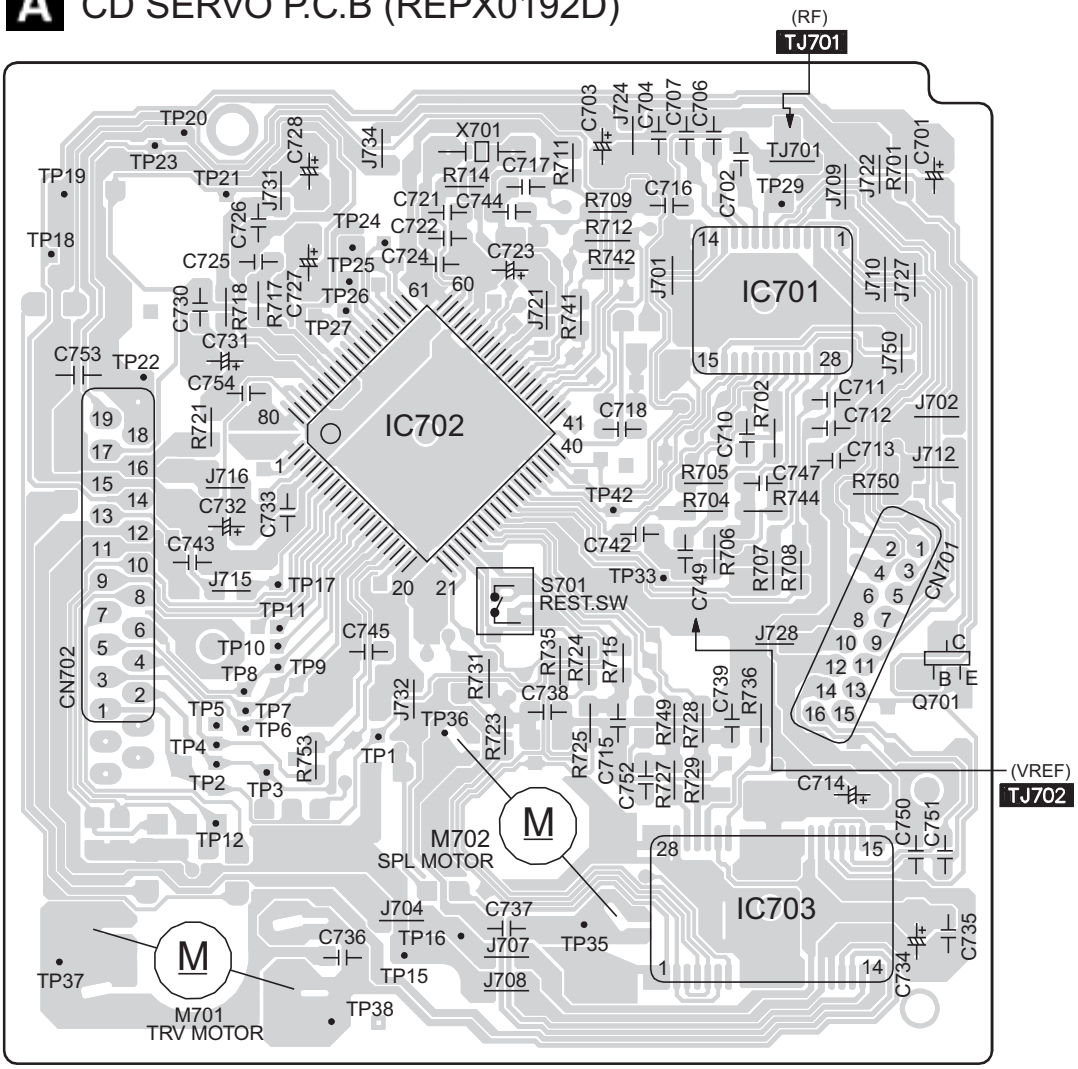
M POWER P.C.B. (REPX0237A)



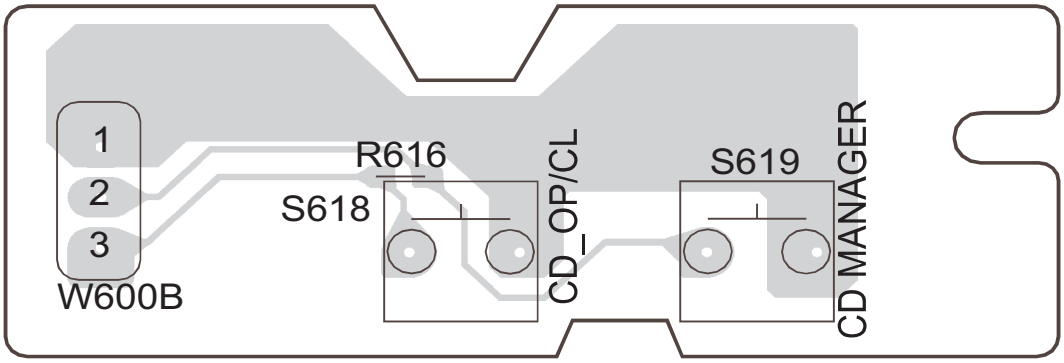
A B C D E F G

1 2 3 4 5 6 7 8 9

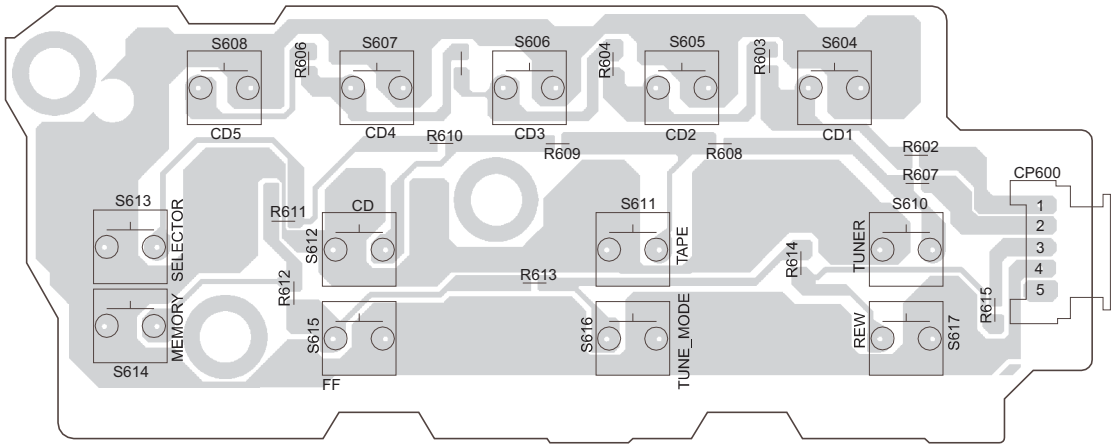
A CD SERVO P.C.B (REPX0192D)



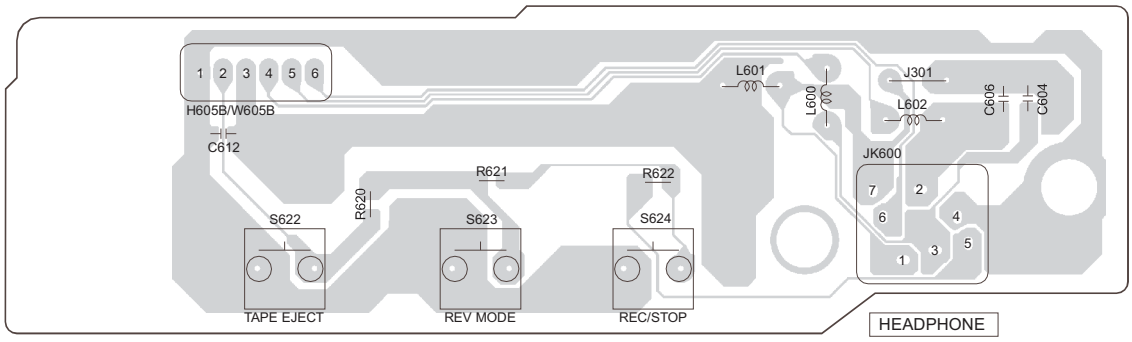
D TACT SWITCH (1) P.C.B. (REPX0236A)

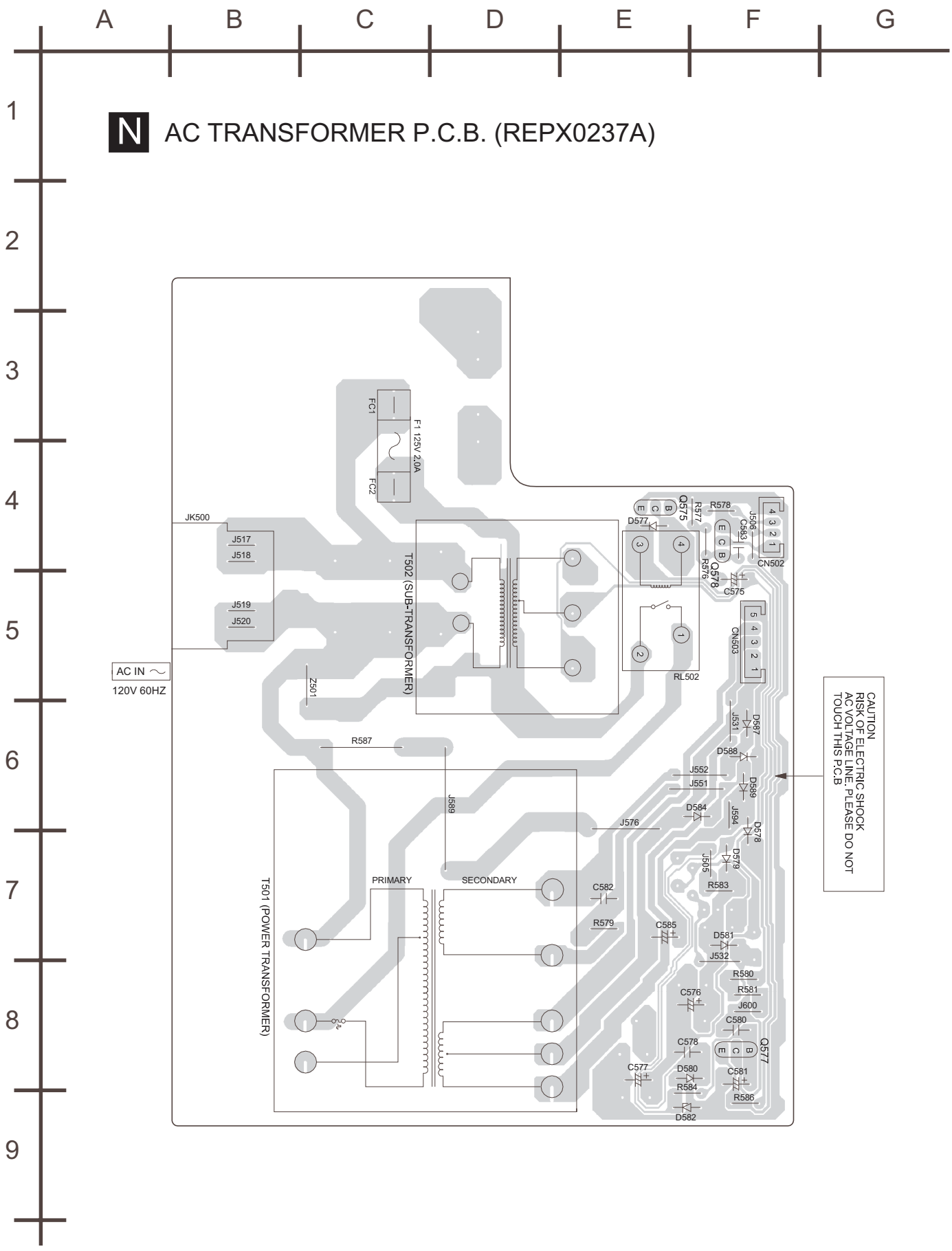


E TACT SWITCH (2) P.C.B. (REPX0236A)



F HEAD PHONE P.C.B. (REPX0236A)



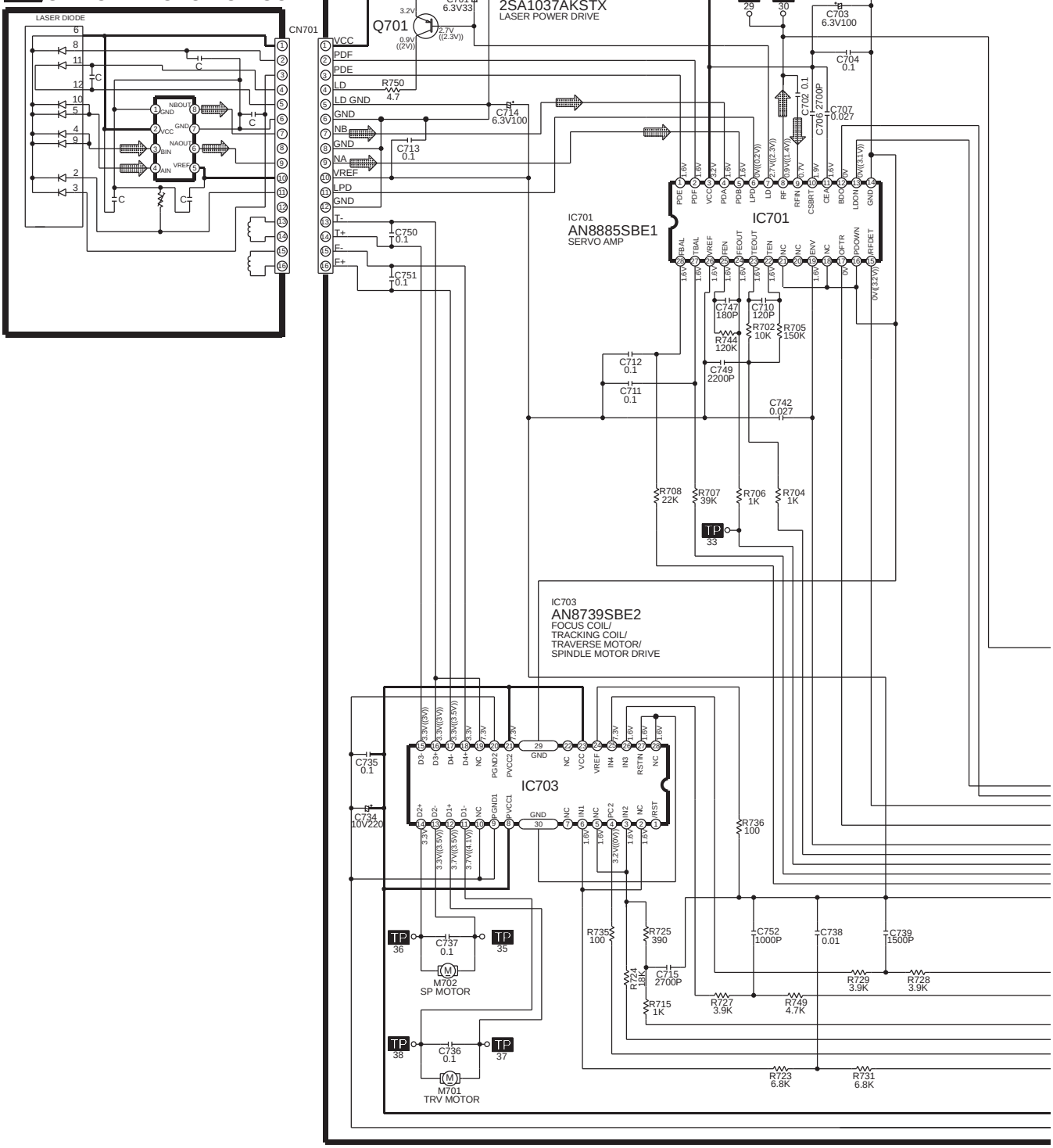

A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
N AC TRANSFORMER P.C.B. (REPX0237A)
JK500
J517
J518
J519
J520
AC IN
120V 60HZ
FC1
F1 125V 2.0A
FC2
T502 (SUB-TRANSFORMER)
Z501
R587
J589
T501 (POWER TRANSFORMER)
PRIMARY
SECONDARY
Q575
R577
R578
D577
J506
C583
CN502
R576
Q578
C575
CN503
RL502
J531
D587
D588
J552
J551
D589
D584
J694
D578
J576
D579
J505
R583
C582
R579
C585
D581
J532
R580
R581
C576
J600
C580
C578
Q577
C577
D580
C581
R584
R586
D582
CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE. PLEASE DO NOT
TOUCH THIS P.C.B

SCHEMATIC DIAGRAM -1

—— : +B SIGNAL LINE : CD SIGNAL LINE

A CD SERVO CIRCUIT

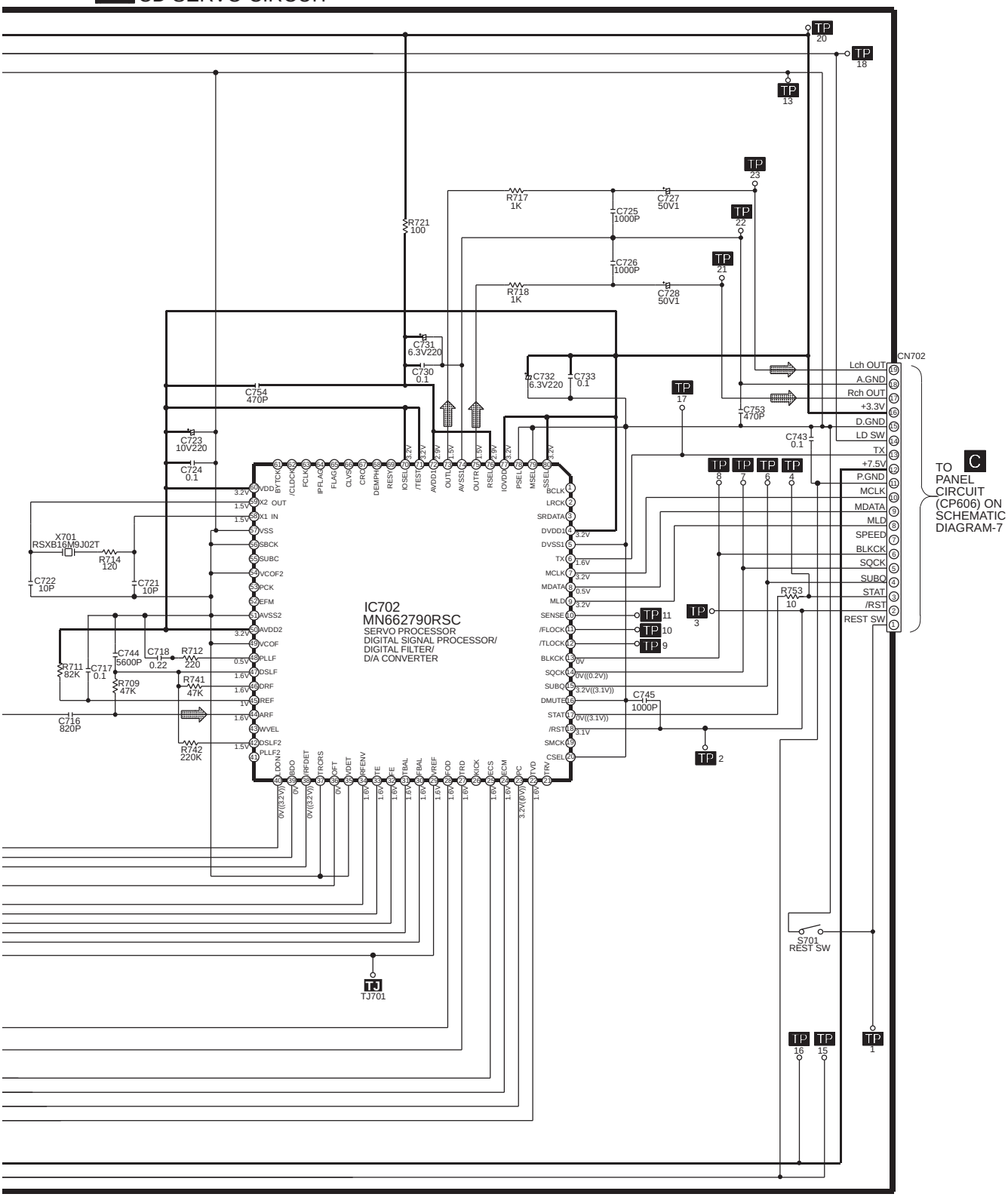
OPTICAL PICKUP CIRCUIT



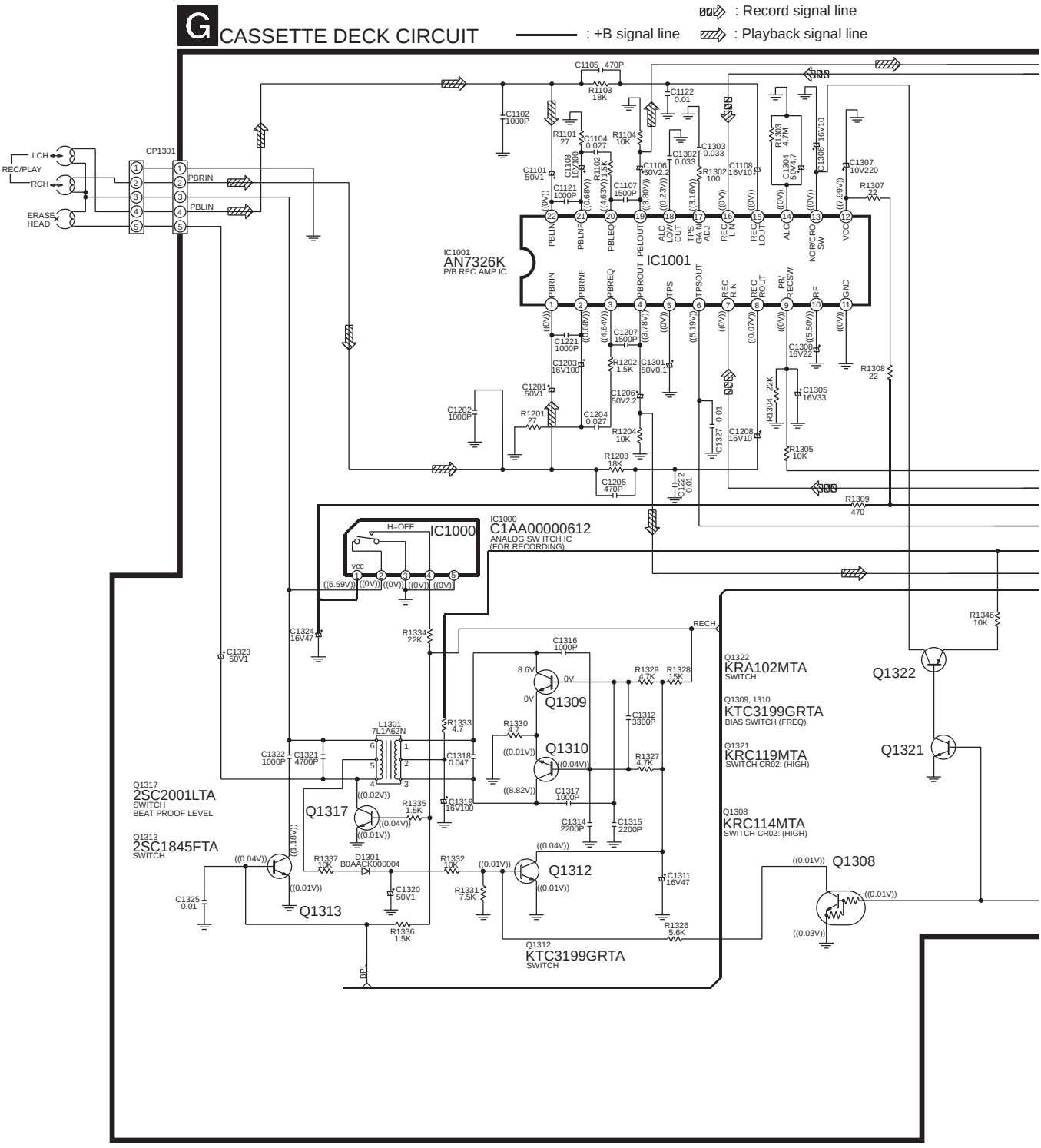
SCHEMATIC DIAGRAM - 2

: +B SIGNAL LINE : CD SIGNAL LINE

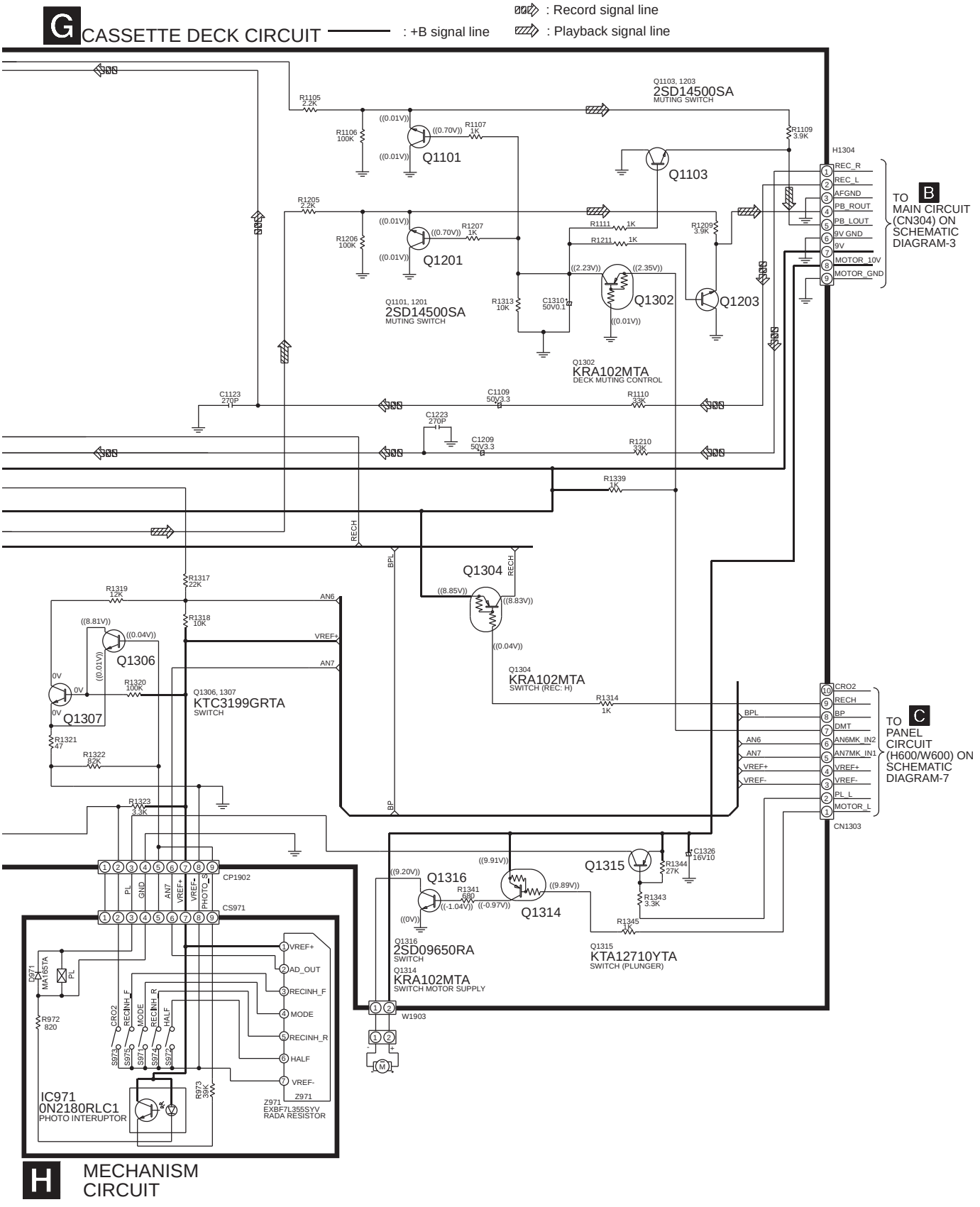
A CD SERVO CIRCUIT



SCHEMATIC DIAGRAM-8



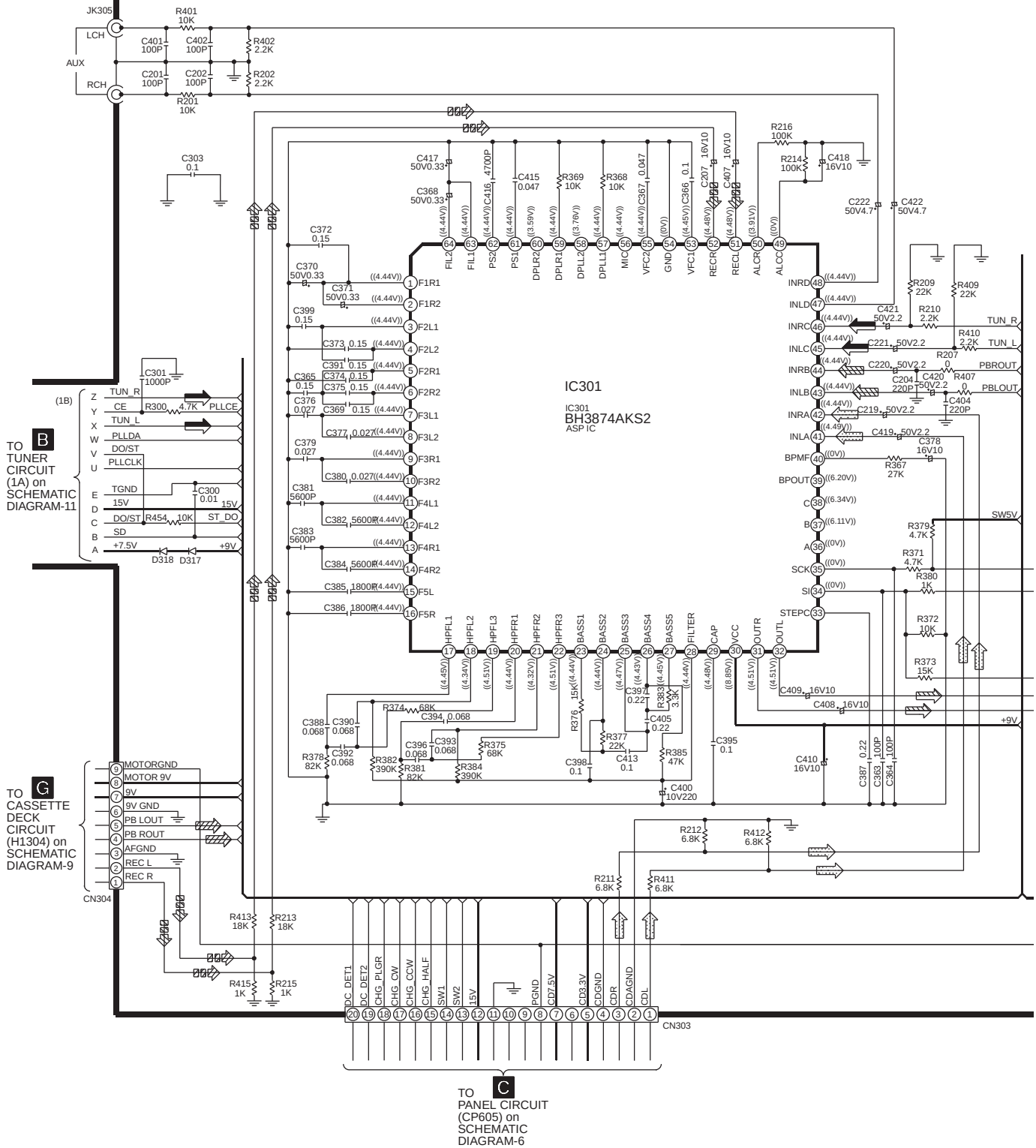
SCHEMATIC DIAGRAM-9



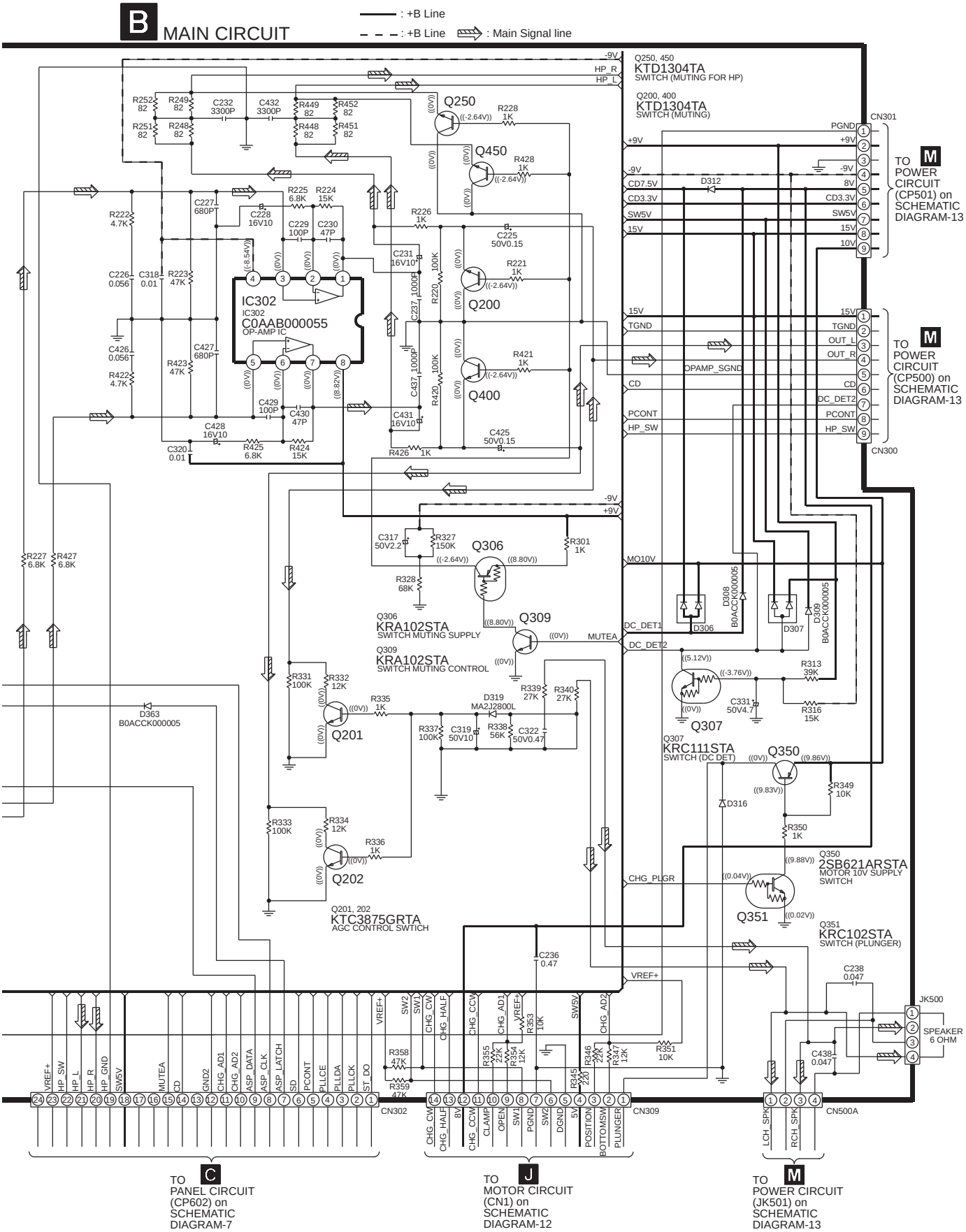
SCHEMATIC DIAGRAM -3

B MAIN CIRCUIT

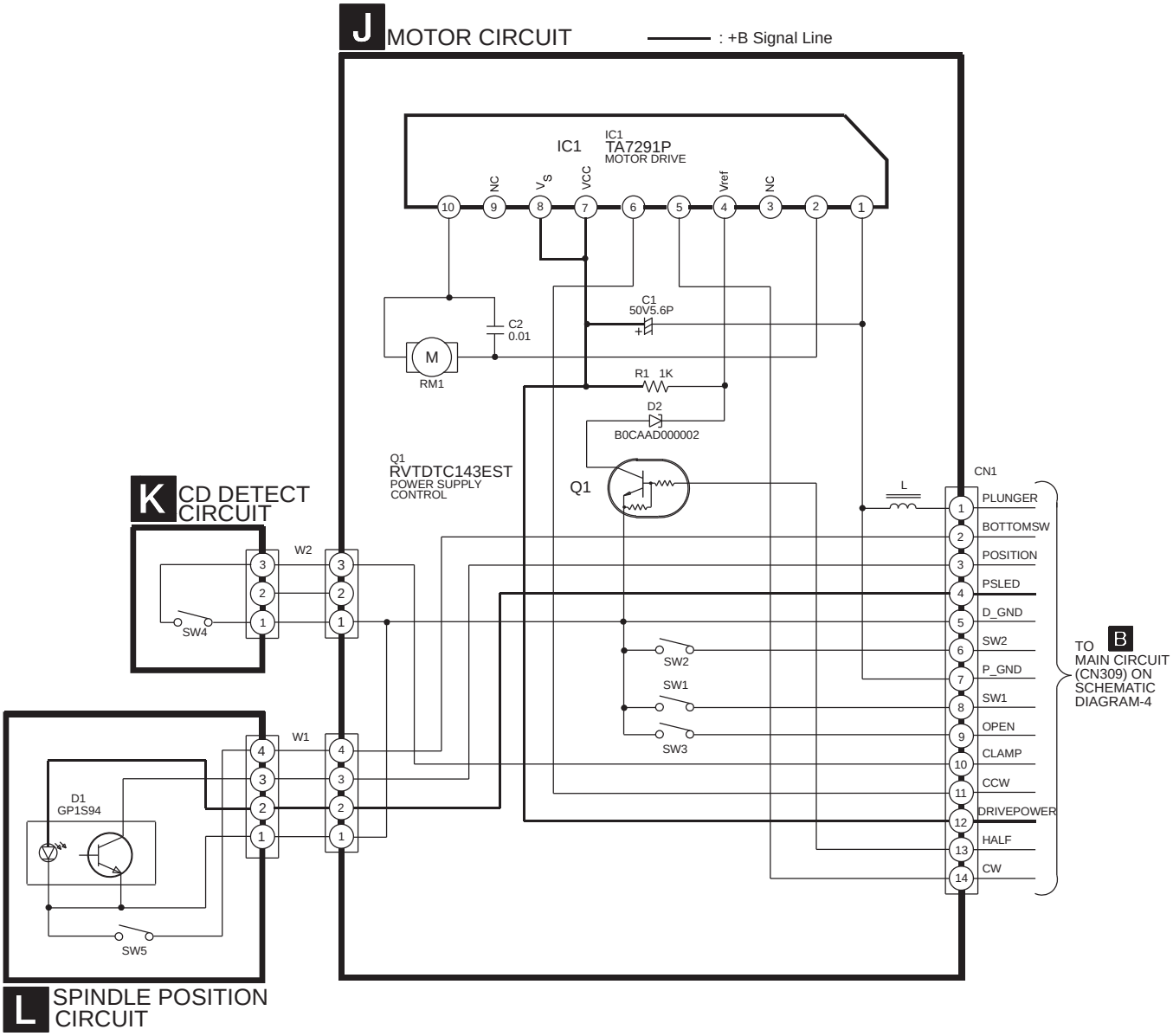
: Rec Signal line
: +B Line
: AM/FM Signal line
: Playback Signal line
: Main Signal line
: CD Signal line



SCHEMATIC DIAGRAM -4



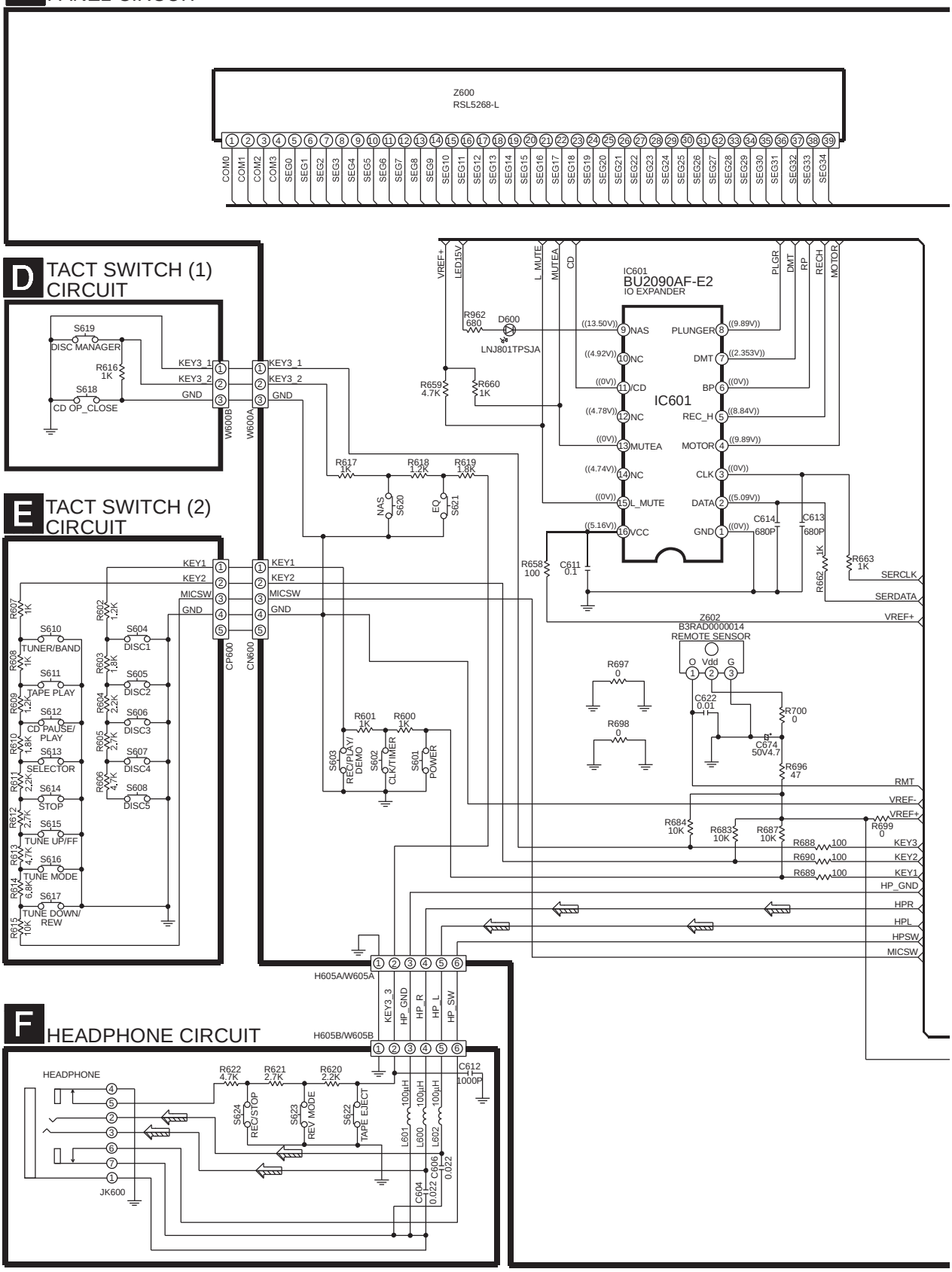
SCHEMATIC DIAGRAM-12



SCHEMATIC DIAGRAM-5

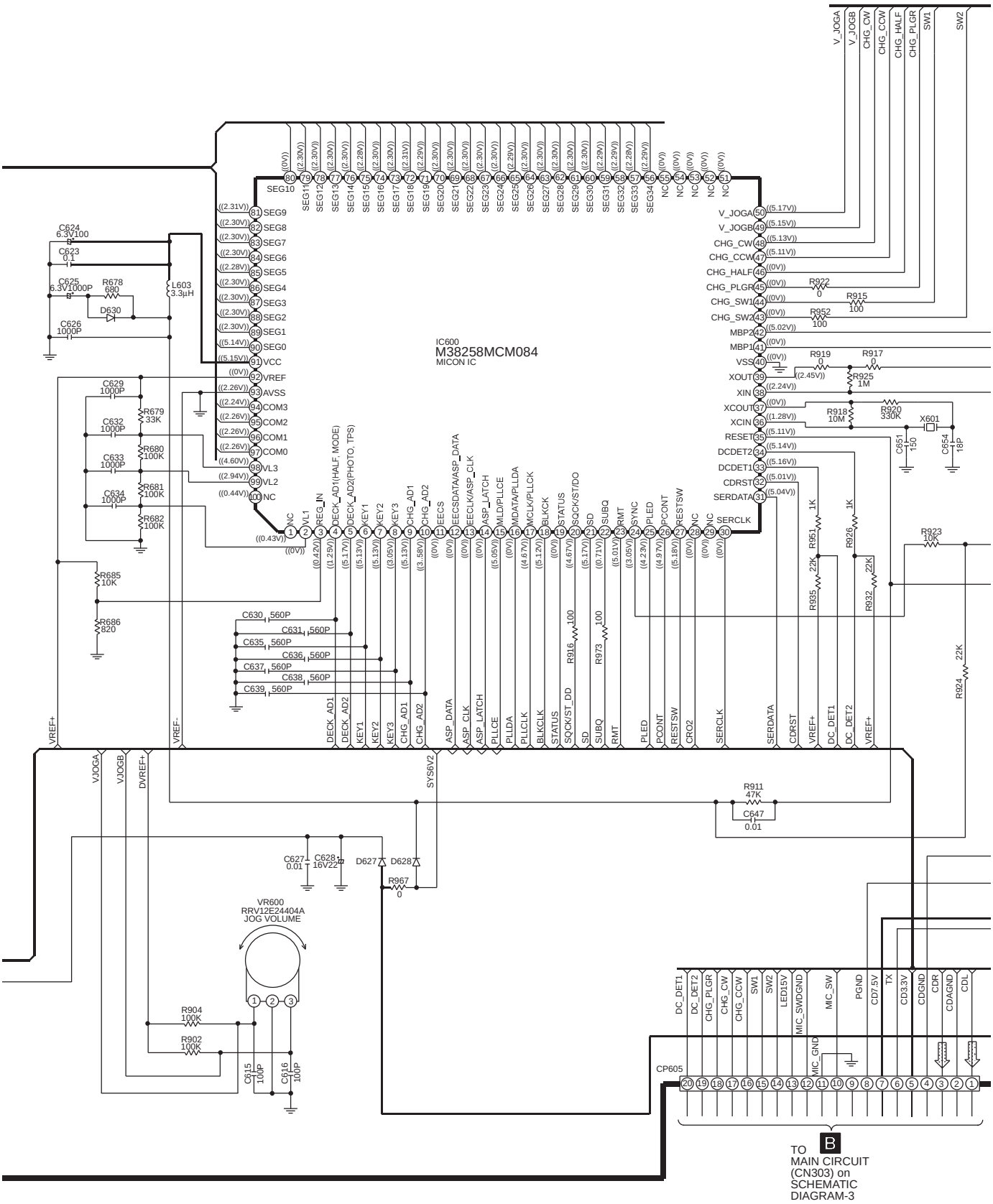
C PANEL CIRCUIT

: +B Line : Main Signal Line



SCHEMATIC DIAGRAM-6

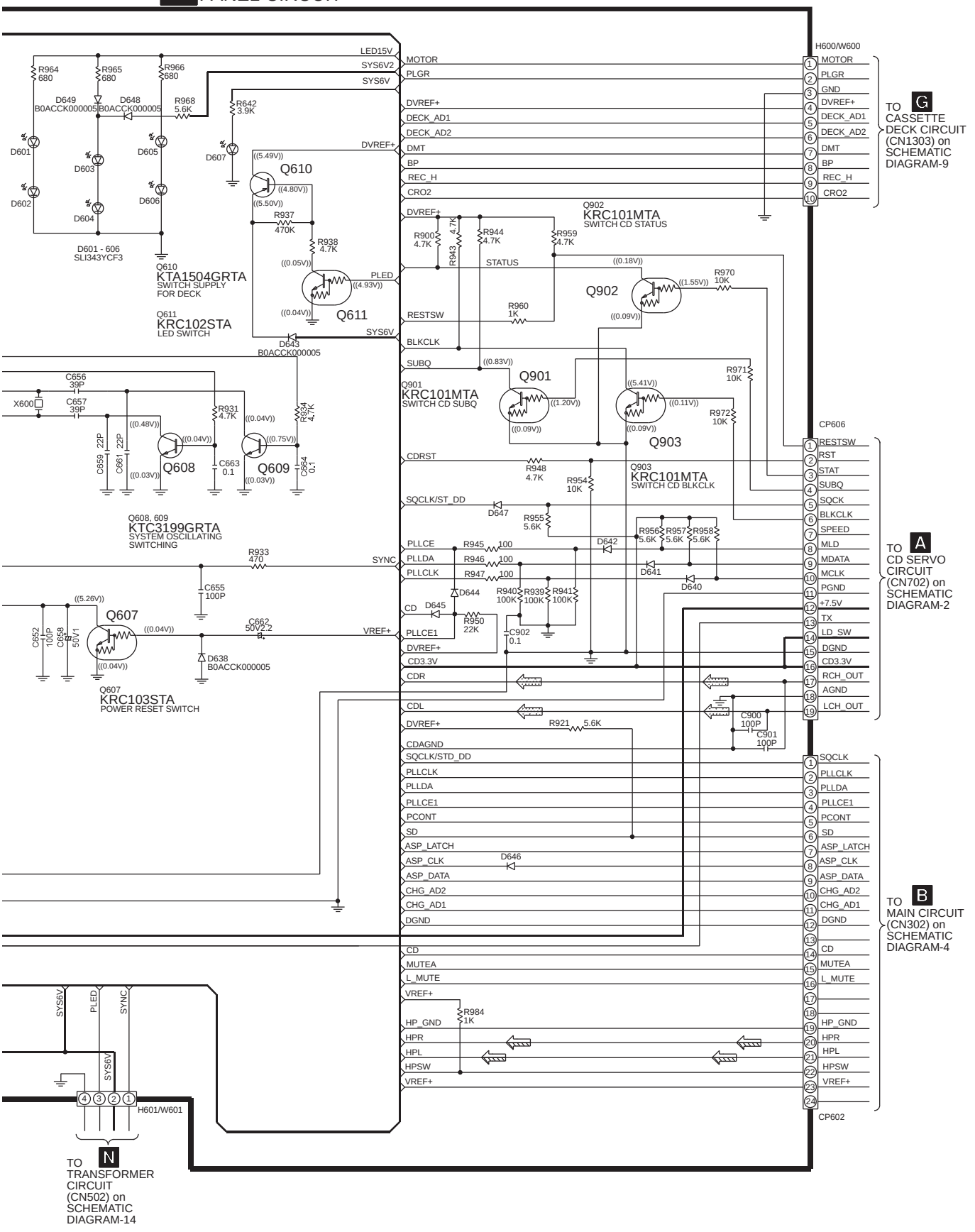
C PANEL CIRCUIT ——— : +B Line ⇨ : CD Signal Line



SCHEMATIC DIAGRAM-7

C PANEL CIRCUIT

—— : +B Line ⇒ : Main Signal Line ⇨ : CD Signal Line



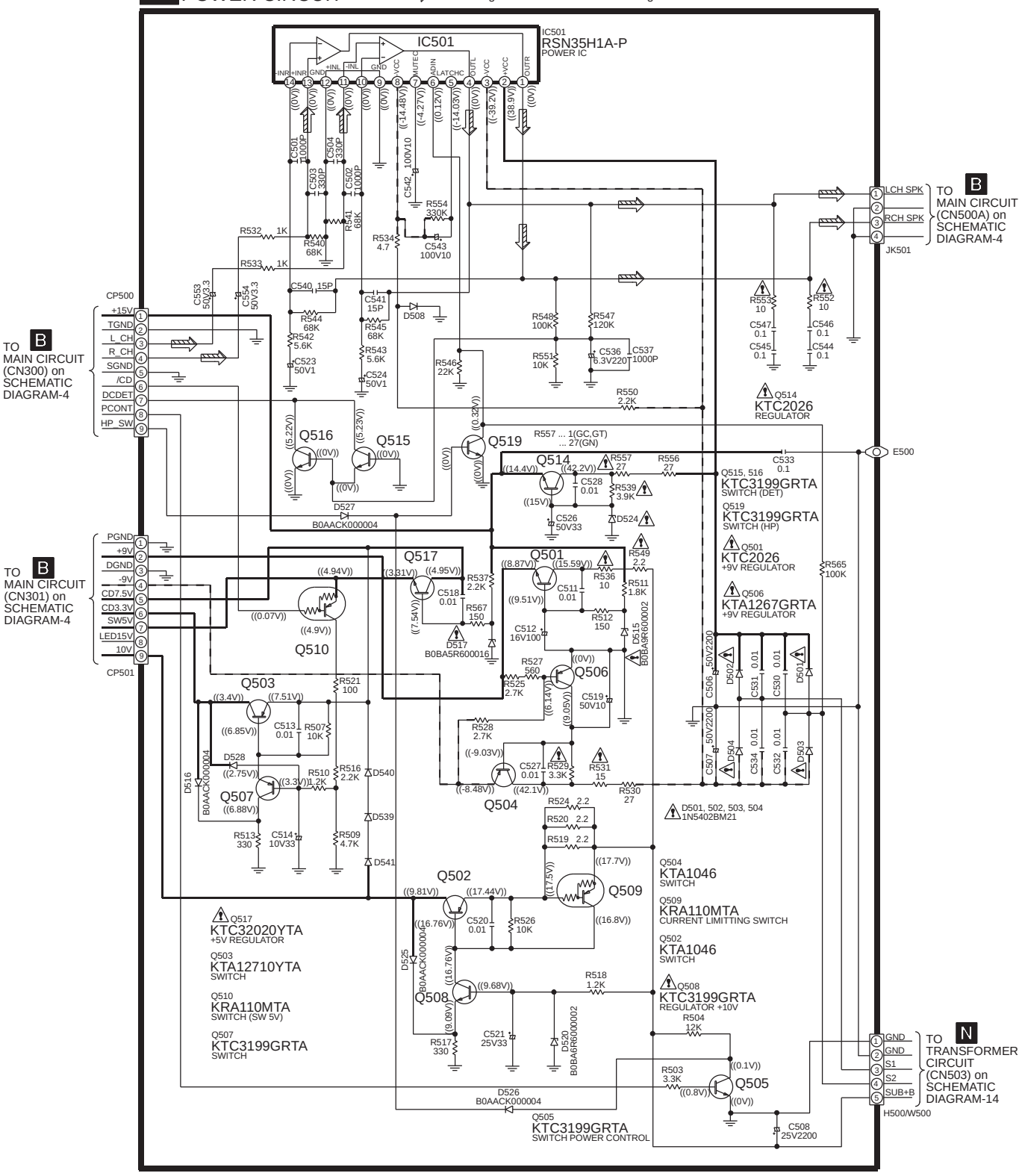
SCHEMATIC DIAGRAM-13

M POWER CIRCUIT

: -B Signal line

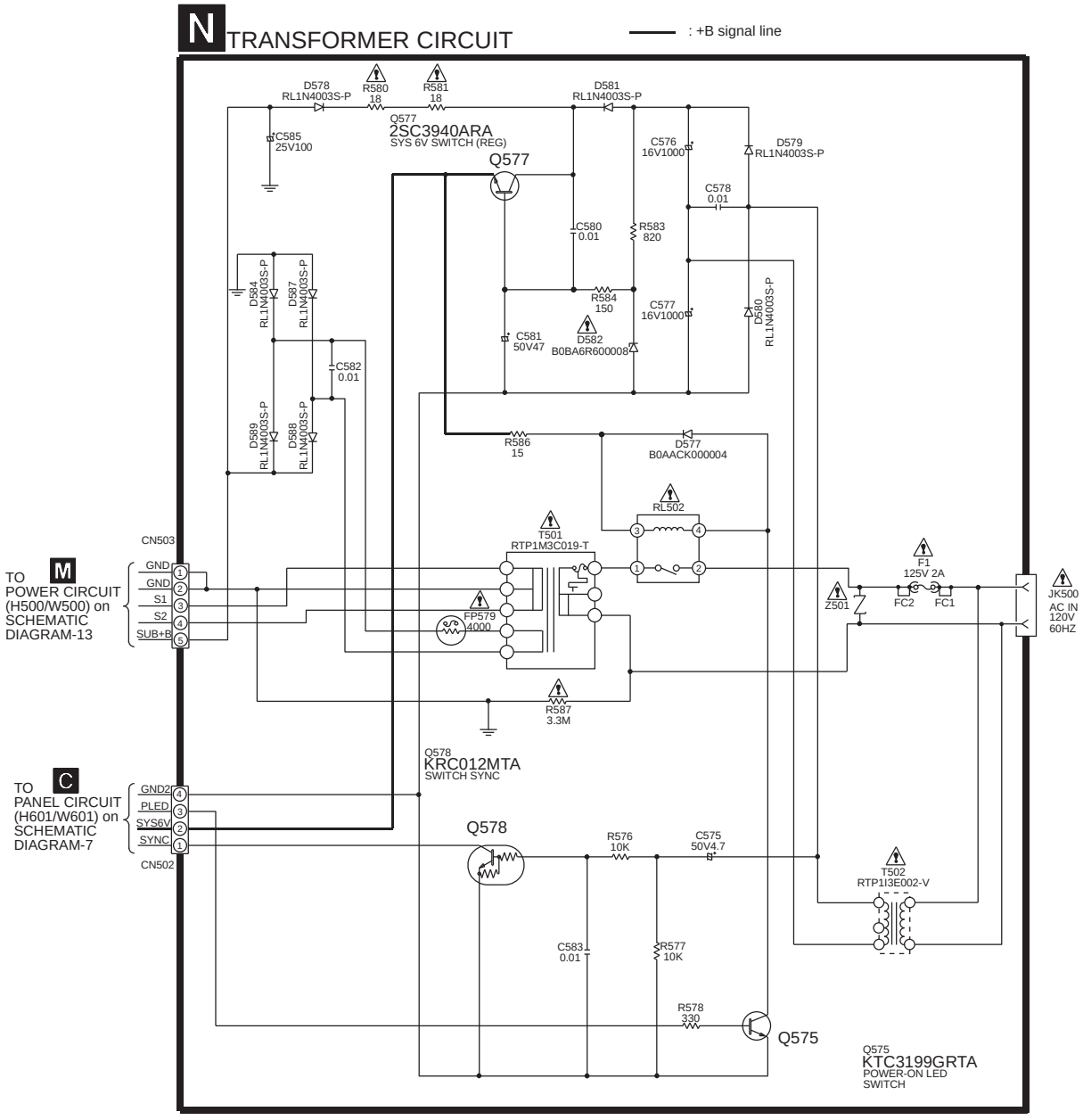
: Main Signal line

: +B Signal line

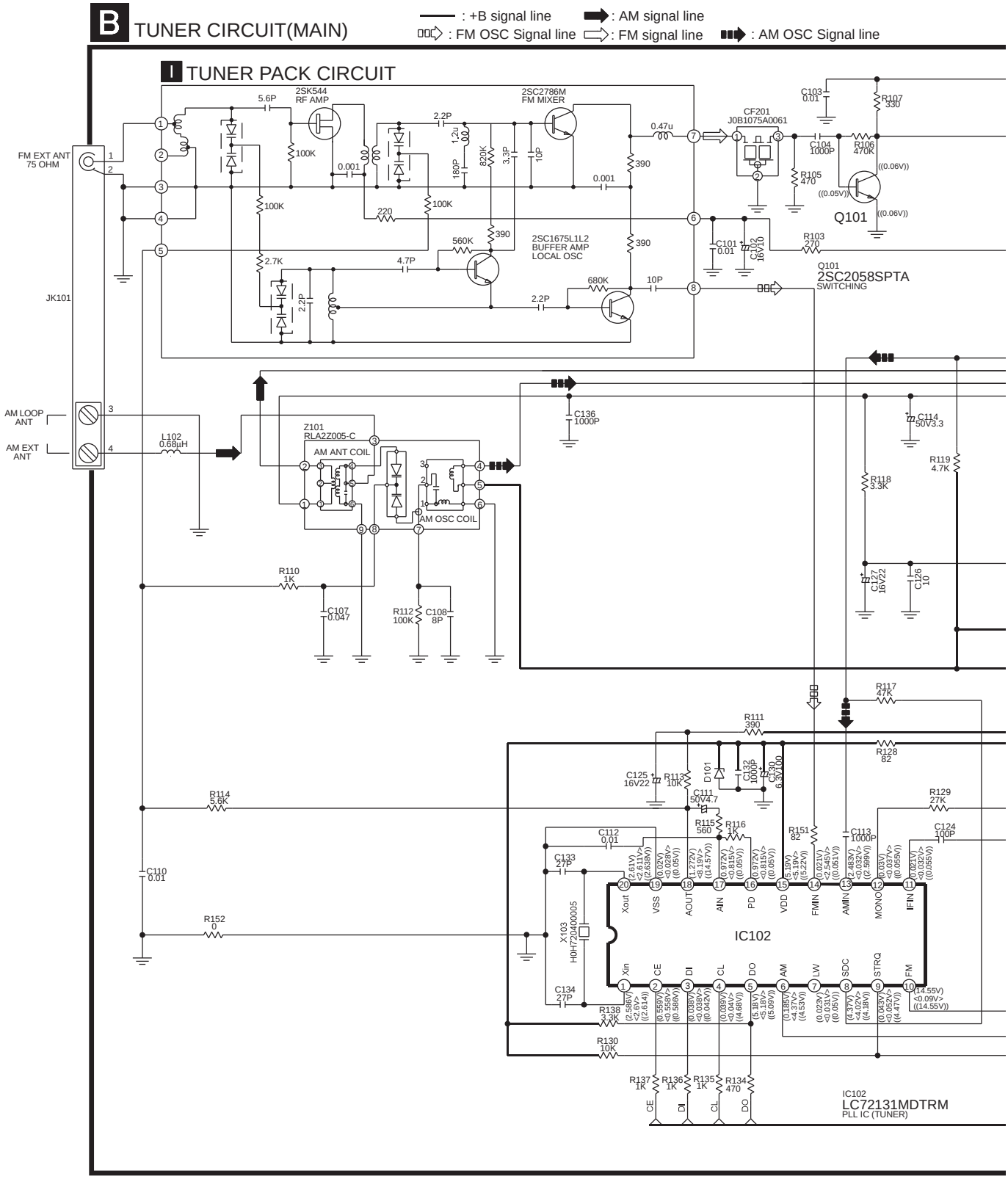

IC501
RSN35H1A-P
POWER IC
+INR +INR GND +INL -INL GND VCC MUTEC ADIN LATCHC OUTL VCC VCC OUTR
TO B MAIN CIRCUIT (CN500A) on SCHEMATIC DIAGRAM-4
LCH SPK
RCH SPK
JK501
TO B MAIN CIRCUIT (CN300) on SCHEMATIC DIAGRAM-4
CP500
+15V TGND L_CH R_CH SGND /CD DCDET PCONT HP_SW
TO B MAIN CIRCUIT (CN301) on SCHEMATIC DIAGRAM-4
CP501
PGND +9V DGND -9V CD7.5V CD3.3V SW5V LED15V 10V
Q514 KTC2026 REGULATOR
Q515, 516 KTC3199GRTA SWITCH (DET)
Q519 KTC3199GRTA SWITCH (HP)
Q501 KTC2026 +9V REGULATOR
Q506 KTA1267GRTA +9V REGULATOR
Q517 KTC32020YTA +5V REGULATOR
Q503 KTA12710YTA SWITCH
Q510 KRA110MTA SWITCH (SW 5V)
Q507 KTC3199GRTA SWITCH
Q504 KTA1046 SWITCH
Q509 KRA110MTA CURRENT LIMITTING SWITCH
Q502 KTA1046 SWITCH
Q508 KTC3199GRTA REGULATOR +10V
Q505 KTC3199GRTA SWITCH POWER CONTROL
D501, 502, 503, 504 1N5402BM21
TO N TRANSFORMER CIRCUIT (CN503) on SCHEMATIC DIAGRAM-14
GND GND S1 S2 SUB+B
H500/W500
E500

SCHEMATIC DIAGRAM-14

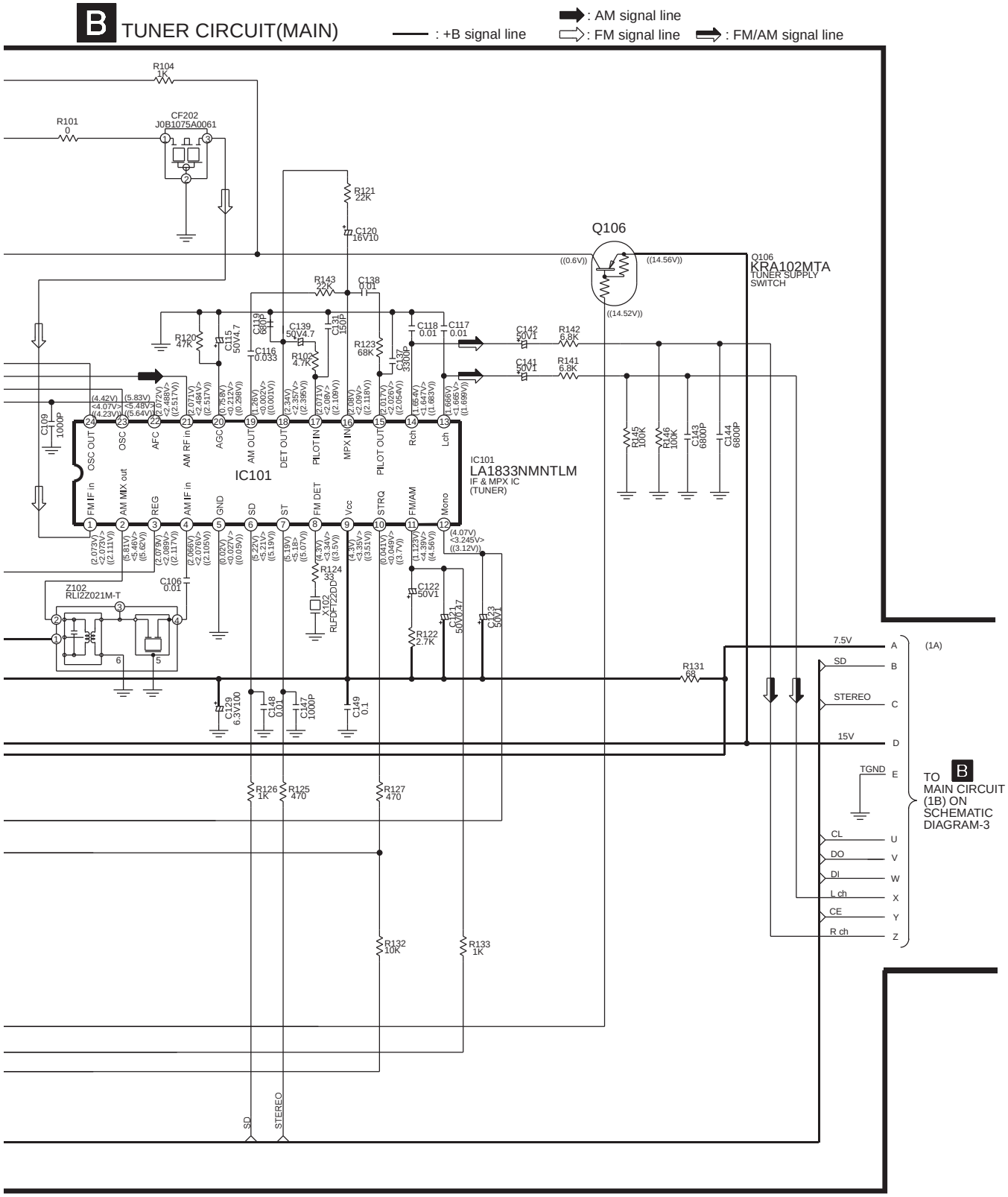
N TRANSFORMER CIRCUIT



SCHEMATIC DIAGRAM-10



SCHEMATIC DIAGRAM-11



Pin No.	Mark	I/O	Function
1	PDE	I	Tracking signal input 1
2	PDF	I	Tracking signal input 2
3	VCC	I	Power supply
4	PDA	I	Focus signal input terminal 1
5	PDB	I	Focus signal input terminal 2
6	LPD	I	APC amp input
7	LD	O	APC amp output
8	RF	O	RFsumming output
9	RFIN	I	Detector's input
10	CSBRT	I	Capacitor for OFTR connection
11	CEA	I	Capacitor for HPF amp connection
12	BDO	O	BDO output ("H" : drop out)
13	LDON	I	APC control
14	GND	—	Ground
15	/RFDET	O	NRFDET output ("L" : detection)
16	PDOWN	O	Power-down input
17	OFTR	O	OFTR output
18	NC	O	N.C.
19	ENV	O	3T-ENV output
20	NC	I	N.C.
21	NC	I	N.C.
22	TEN	I	TE amp input
23	TEOUT	O	TE amp output
24	FEOUT	O	FE amp output
25	FEN	I	FE amp input
26	VREF	O	Reference voltage output
27	TBAL	I	Tracking balance control
28	FBAL	I	Focus balance control

13.2. IC702 (MN662790RSC) Servo processor/ Digital signal processor/ Digital filter/ D/A converter

No.	Mark	I/O	Function
1	BCLK	O	N.C.
2	LRCK	O	N.C.
3	SRDATA	O	N.C.
4	DVDD1	I	Power supply input (for digital circuit)
5	DVSS1	I	GND (for digital circuit)
6	TX	O	Digital audio interface signal output (Latches data at first transition)
7	MCLK	I	Microprocessor command clock signal input
8	MDATA	I	Microprocessor command data signal input
9	MLD	I	Microprocessor command load signal input
10	SENSE	O	Sense signal output (OFT,FESL,MAGEND, NAJEND,POSAD,SFG) (Not used, open)
11	/FLOCK	O	Focus servo feeding signal output (“L” : Feed)
12	/TLOCK	O	Tracking servo feeding signal output (“L” : Feed)
13	BLKCK	O	Sub-code block clock signal output (BLKCKf = 75Hz during normal playback)
14	SQCK	I	External clock signal input for sub-code Q resistor
15	SUBQ	O	Sub-code Q code output
16	DMUTE	I	Muting input (“H” : mute)
17	STAT	O	Status signal output (CRC,CUE,CLVS / , TTSTVP,FCLV,SQCK)
18	/RST	I	Reset signal input

No.	Mark	I/O	Function
19	SMCK	O	1/2-diveded clock signal of crystal osscillating at MSEL = “H” (fSMCK = 8.4672 MHz) 1/4-divided clock signal of crystal oscillating at MSEL = “L” (fSMCK = 4.2336 MHz)
20	CSEL	I	Frequency Selection Terminal H = 33.8688 MHz ; L = 16.9344 MHz
21	TRV	O	N.C
22	TVD	O	Traverse drive output
23	PC	O	Spindle motor ON output ("L" : ON)
24	ECM	O	Spindle motor drive signal output(forced mode output)
25	ECS	O	Spindle motor drive signal output (servo error signal output)
26	KICK	O	N.C.
27	TRD	O	Tracking drive output
28	FOD	O	Focus drive output
29	VREF	I	D/A (drive) output (TVD, ECS, TRD, FOD, FBAL, TBAL) Reference voltage input
30	FBAL	O	Focus balance adjustment output
31	TBAL	O	Tracking balance adjustment output
32	FE	I	Focus error signal input (analog input)
33	TE	I	Tracking error signal input (analog input)
34	RFENV	I	RF envelope signal input
35	VDET	I	Vibration detection signal input ("H" : detection)

No.	Mark	I/O	Function
36	OFT	I	Off-track signal input ("H" : off track)
37	TRCRS	I	Track cross signal input
38	/RFDET	I	RF detection signal input ("L" : detection)
39	BDO	I	Dropout signal input ("H" : Dropout)
40	LDON	O	Laser on signal output ("H" : ON)
41	PLLF2	I/O	N.C.
42	DSLF2	O	Tracking Offset alignment output/ DSL Balance Output (DA Output)
43	WVEL	O	N.C.
44	ARF	I	RF signal input
45	IREF	I	Reference current input
46	DRF	I	DSL bias terminal (Not used, open)
47	DSLF	I/O	DSL loop filter terminal
48	PLLF	I/O	PLL loop filter terminal
49	VCOF	I/O	VCO loop filter terminal
50	AVDD2	I	Power supply input (for analog circuit)
51	AVSS2	I	GND (for analog circuit)
52	EFM	-	EFM signal output
53	PCK	-	PLL extraction clock output (fPCK = 4.321 MHz during normal playback)
54	VCOF2	I/O	VCO Loop filter for 33.8688 MHz conversation terminal for 16.9344 MHz crystal mode, must use other circuit
55	SUBC	O	Sub-code serial data output
56	SBCK	I	Clock input for sub-code serial data

No.	Mark	I/O	Function
57	VSS	I	GND
58	X1 IN	I	Crystal oscillating circuit input (f = 16.9344MHz)
59	X2 OUT	O	Crystal oscillating circuit input (f = 16.9344 MHz)
60	VDD	I	Power supply input (for oscillating circuit)
61	BYTCK	-	Byte clock output
62	/CLDCK	-	Sub-code frame clock signal output (fCLDCK = 7.35 kHz during normal playback)
63	FCLK	-	Crystal frame clock signal output (fCLK = 7.35 kHz, double = 14.7 kHz)
64	IPFLAG	-	Interpolation flag output (“H” : Interpolation)
65	FLAG	-	Flag output
66	CLVS	-	Spindle servo phase synchronizing signal output ("H" : CLV, "L" : rough servo)
67	CRC	-	Sub-code CRC checked output (“H’ : OK, “L” :NG)
68	DEMPH	-	De-emphassis ON signal output (“H” : ON)
69	RESY	-	Frame re-synchronizing signal output
70	IOSEL	I	Mode Switching Terminal
71	/TEST	I	Test input
72	AVDD1	I	Power supply input (for analog circuit)
73	OUTL	O	Left channel audio signal output
74	AVSS1	I	GND
75	OUTR	O	Right channel audio signal output

No.	Mark	I/O	Function
76	RSEL	I	RF signal polarity assignment input (at "H" level, RSEL="H", at "L" level, RESL= "L")
77	IOVOD	I	5V supply input
78	PSEL	I	Test terminal (connected to Gnd)
79	MSEL	I	SMCK oscillating frequency designation input (“L” :4.2336 MHz, “H”: 8.4672 MHz)
80	SSEL	I	SUBQ output mode select (“H”:Q-code buffer mode)

13.3. IC703 (AN8739SBE2) Focus coil/ Tracking coil/ Traverse motor/ Spindle motor driver

No.	Mark	I/O	Function
1	/RST	-	RESET output terminal
2	NC	-	N.C.
3	IN2	I	Motor Drive (2) input
4	PC2	I	Turntable motor drive signal (“L :ON)
5	NC	-	N.C.
6	IN1	I	Motor driver (1) input
7	NC	I	N.C.
8	PVCC1	I	Power supply (1) for driver
9	PGND1	-	Ground connection (1) for driver
10	NC	-	N.C.
11	D1-	O	Motor driver (1) reverse-action output
12	D1+	O	Motor driver (1) forward-action output
13	D2-	O	Motor driver (2) reverse-action output
14	D2+	O	Motor driver (2) forward-action output
15	D3-	O	Motor driver (3) reverse-action output
16	D3+	O	Motor driver (3) forward-action output

No.	Mark	I/O	Function
17	D4-	O	Motor driver (4) reverse-action output
18	D4+	O	Motor driver (4) forward-action output
19	NC	-	N.C.
20	PGND2	-	Ground connection (2) for driver
21	PVCC2	I	Power supply (2) for driver
22	NC	-	N.C.
23	VCC	I	Power supply terminal
24	VREF	I	Reference voltage input
25	IN4	I	Motor driver (4) input
26	IN3	I	Motor driver (3) input
27	RSTIN	I	Reset terminal
28	NC	-	N.C.

13.4. IC600 (M38258MCM084) System Microprocessor

No.	Mark	I/O	Function
1	N.C.	-	Open
2	VL1	-	LCD Bias
3	REGION_ IN	A-D I	Region and function setting
4	DECK_ AD1	A-D I	Tape mecha condition input (HALF/MODE/ RECIN_R/RECIN_F)
5	DECK_ AD2	A-D I	Tape mecha condition input (TPS, PHOTO)
6	KEY 1	A-D I	Key 1 input
7	KEY 2	A-D I	Key 2 input
8	KEY 3	A-D I	Key 3 input
9	CHG_AD1	A-D I	CHNGR SW A-D DETECTION INPUT 1
10	CHG_AD2	A-D I	CHNGR SW A-D DETECTION INPUT 2
11	EECS	I/O	EEPROM chip select output
12	EEDAT/ ASP_ DATA	I/O	EEPROM data input / ASP control data output
13	EECLK/ ASP_ CLK	I/O	EECLKoutput / ASP control clock output
14	ASP_ LATCH	O	ASP control latch output
15	MLD/ PLLCE	O	CD command load output/Tuner PLL chip enable
16	MDATA/ PLLDA	O	CD command data output/Tuner PLL chip output
17	MCLK/ PLLCLK	O	CD command data output/Tuner PLL chip output
18	BLKCK	I	CD Block clock input (Inverted)
19	STATUS	I	CD Signal Processor status input (INV)
20	SQCK/ST/ DO	O	Subcode clock output / Tuner IF data / Stereo Input
21	SD	I/O	Tuner Signal detect input

No.	Mark	I/O	Function
22	SUBQ	I	CD Subcode data input (INV)
23	RMT	I	Remote control input
24	SYNC	I	AC failure detect input
25	PLED	O	Primary relay control
26	PCONT	O	Secondary relay control output
27	REST_SW	I	CD limit SW input for the most inner point
28	N.C.	O	No connection
29	N.C.	O	No connection
30	SER_CLK	O	Serial output clock
31	SER_DATA	O	Serial output data
32	CDRST	O	CD reset output control
33	DCDET 1	I	DC Detect input 1
34	DCDET 2	I	DC Detect input 2
35	RESET	-	RESET input
36	XCIN	-	32.768 kHz sub clock
37	XCOUT	-	32.768 kHz sub clock
38	XIN	-	8.0 MHz main clock
39	XOUT	-	8.0 MHz main clock
40	VSS	-	Ground (0V)
41	MBP1	O	MPU beat proof output 1
42	MBP 2	O	MPU beat proof output 2
43	CHG_SW 2	I	CD changer switch 2 input
44	CHG_SW 1	I	CD changer switch 1 input
45	CHG_ PLGR	O	Changer plunger output
46	CHG_ HALF	O	Changer half drive mode
47	CHG_CCW	O	Changer motor CCW output
48	CHG_CW	O	Changer motor CW output
49	VJOG_B	I	Main volume jog input B
50	VJOG_A	I	Main volume jog input A
51-55	N.C.	O	No connection

No.	Mark	I/O	Function
56-90	SEG34-SEG0	O	Segment drive output
91	VCC	-	Power supply (+5V)
92	VREF	-	Reference for A-D
93	AVSS	-	Analog ground (0V)
94	COM3	-	LCD common 3 output
95	COM2	-	LCD common 2 output
96	COM1	-	LCD common 1 output
97	COM0	-	LCD common 0 output
98	VL3	-	LCD Bias
99	VL2	-	LCD Bias
100	N.C.	-	OPEN

14. Block Diagram

15. Schematic Diagram

(All schematic diagrams may be modified at any time with the development of the new technology)

Note:

S601

: Power switch

S602

: Clock/Timer switch

S603

: Rec/Play/Demo switch

S604

: Disc 1 switch

S605

: Disc 2 switch

S606

: Disc 3 switch

S607

: Disc 4 switch

S608

: Disc 5 switch

S610

: Tuner/Band switch

S611

: Tape Play switch

S612

: CD Pause switch

S613

: Selector switch

S614

: Stop switch

S615

: Tune Up/FF switch

S616

: Tune Mode switch

S617

: Tune Down/Rew switch

S618

: CD Open/Close switch

S619

: CD Manager switch

S620

: Tape Eject switch

S621

: Rev Mode switch

S622

: Tape Eject switch

S623

: Rev Mode switch

S624

: Rec Stop switch

S701

: Reset switch

S971

: Mode switch

S972

: Leaf switch

S973

: Leaf switch

S974

: Leaf switch

S975

: Leaf switch

SW1

: Slide switch

SW2

: Slide switch

SW3

: Switch

SW4

: Switch

SW5

: Lower switch

VR600

: Volume Knob

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

No mark	**: Playback**	**<< >>**	**: Rec**	**< >**	**: FM**
(( ))	**: CD**	**( )**	**: AM**	**[ ]**	**: AUX**

- Importance safety notice :

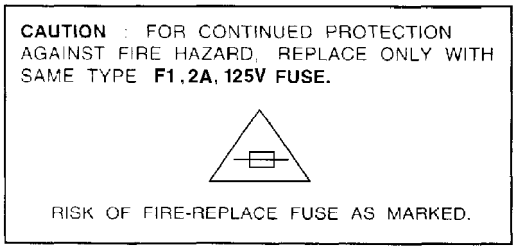
Components identified by ⚠ mark have special characteristics

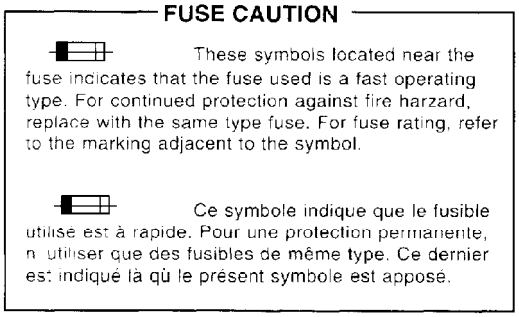
important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !

IC, LSI and VLSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

- **Cover the parts boxes made of plastics with aluminium foil.**
- **Put a conductive mat on the work table.**
- **Ground the soldering iron.**
- **Do not touch the pins of IC, LSI or VLSI with fingers directly.**

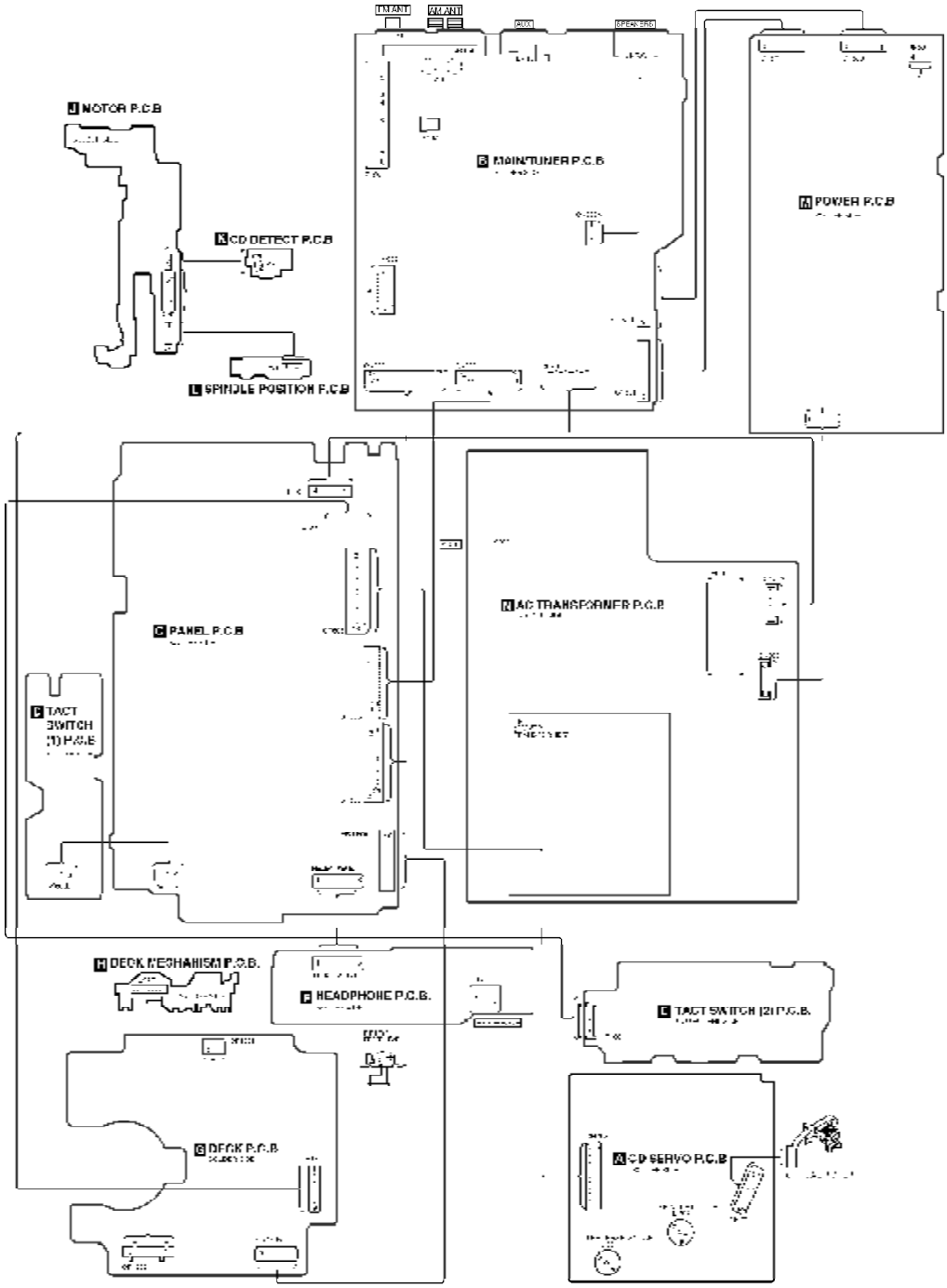

CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F1, 2A, 125V FUSE.
RISK OF FIRE-REPLACE FUSE AS MARKED.


FUSE CAUTION
These symbols located near the fuse indicates that the fuse used is a fast operating type. For continued protection against fire harzard, replace with the same type fuse. For fuse rating, refer to the marking adjacent to the symbol.
Ce symbole indique que le fusible utilisé est à rapide. Pour une protection permanente, n utiliser que des fusibles de même type. Ce dernier est indiqué là qù le présent symbole est apposé.

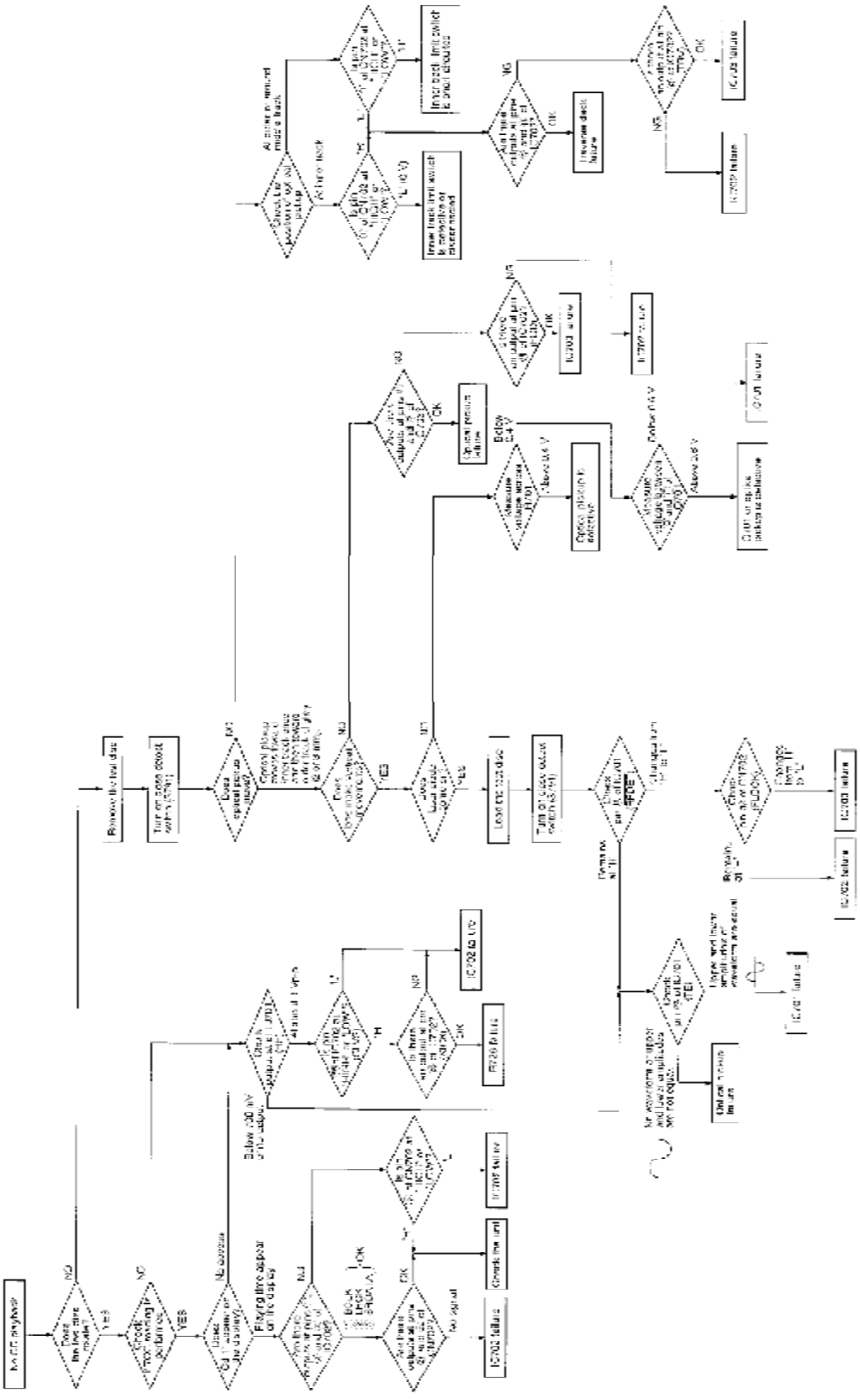
16. Printed Circuit Board

Note: Circuit board diagrams may be modified at any time with the development of new technology.

17. Wiring Connection Diagram



18. Troubleshooting Guide



19. Parts Location and Replacement Parts List

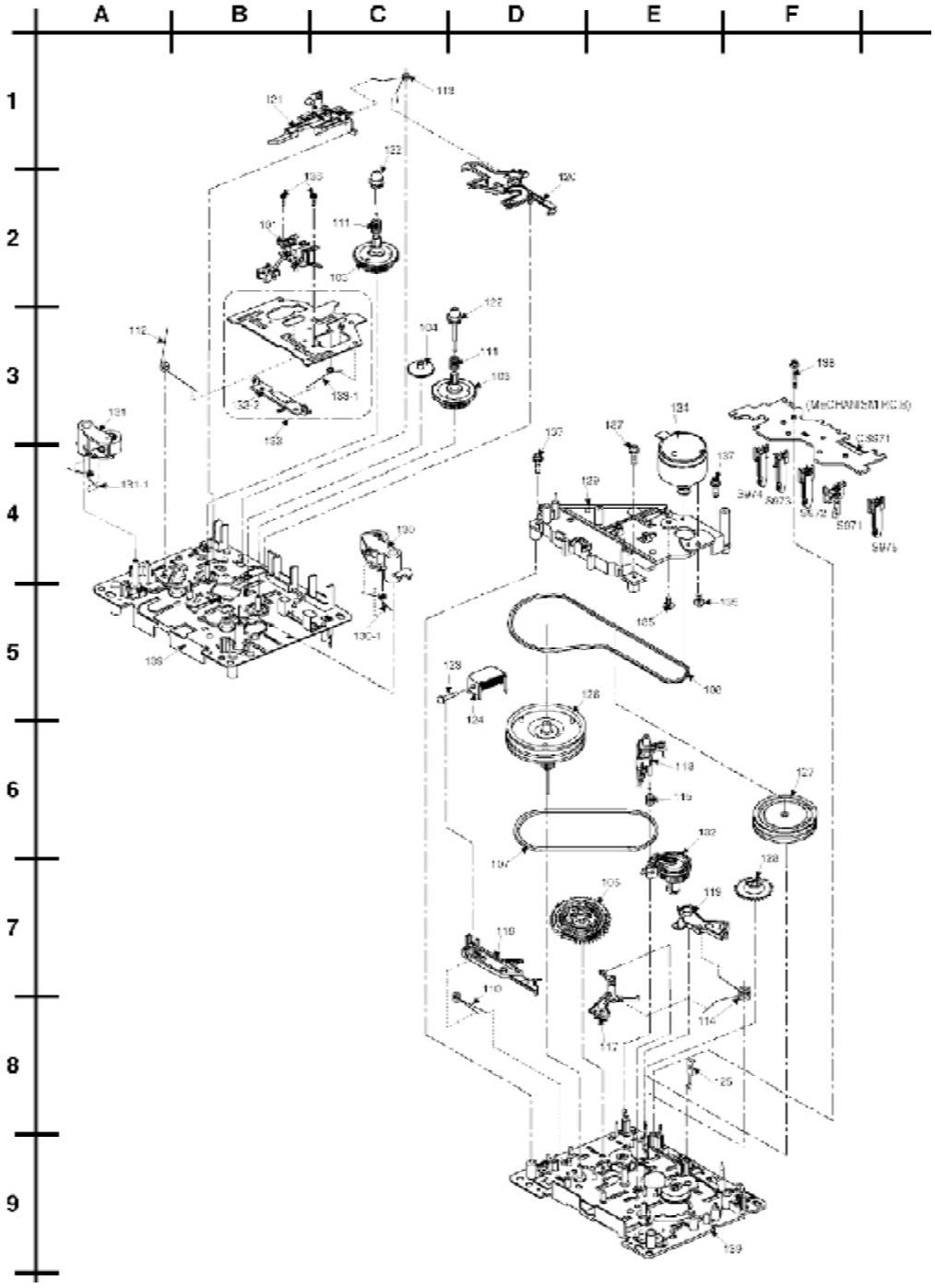
Notes:

- **Important safety notice:**
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardent (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.
  When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.
- **The parenthesized indications in the Remarks columns specify the areas or colour. (Refer to teh cover page for area or colour)**
  Parts without these indications can be used for all areas.
- **Warning: This product uses a laser diode. Refer to caution statements on "Precaution of Laser Diode".**
- **Capacitor values are in microfarads (μ F) unless specified otherwise, P= Pico-farads (pF), F= Farads.**
- **Resistance values are in ohms, unless specified otherwise, 1K= 1,000 (OHM).**
- **The marking (RTL) indicates that the Retention Time is limited for this items. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of a availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.**
- **[M] Indicates in the Remarks columns indicates parts supplied by MESA.**
- **The "(SF)" mark denotes the standard part.**
- **Remote Control Unit: Supply period for three years from terminal of production.**
- **Reference for O/I book languages are as follows:**

Ar :	**Arabic**	**Du :**	**Dutch**	**It :**	**Italian**	**Sp :**	**Spanish**
Cf :	**Canadian French**	**En :**	**English**	**Ko :**	**Korean**	**Sw :**	**Swedish**
Cz :	**Czech**	**Fr :**	**French**	**Po :**	**Polish**	**Co :**	**Traditio Chinese**
Da :	**Danish**	**Ge :**	**German**	**Ru :**	**Russian**	**Cn :**	**Simplifi Chinese**

19.1. Deck Mechanism (RAA4109-1S)

19.1.1. Deck Mechanism Parts Location

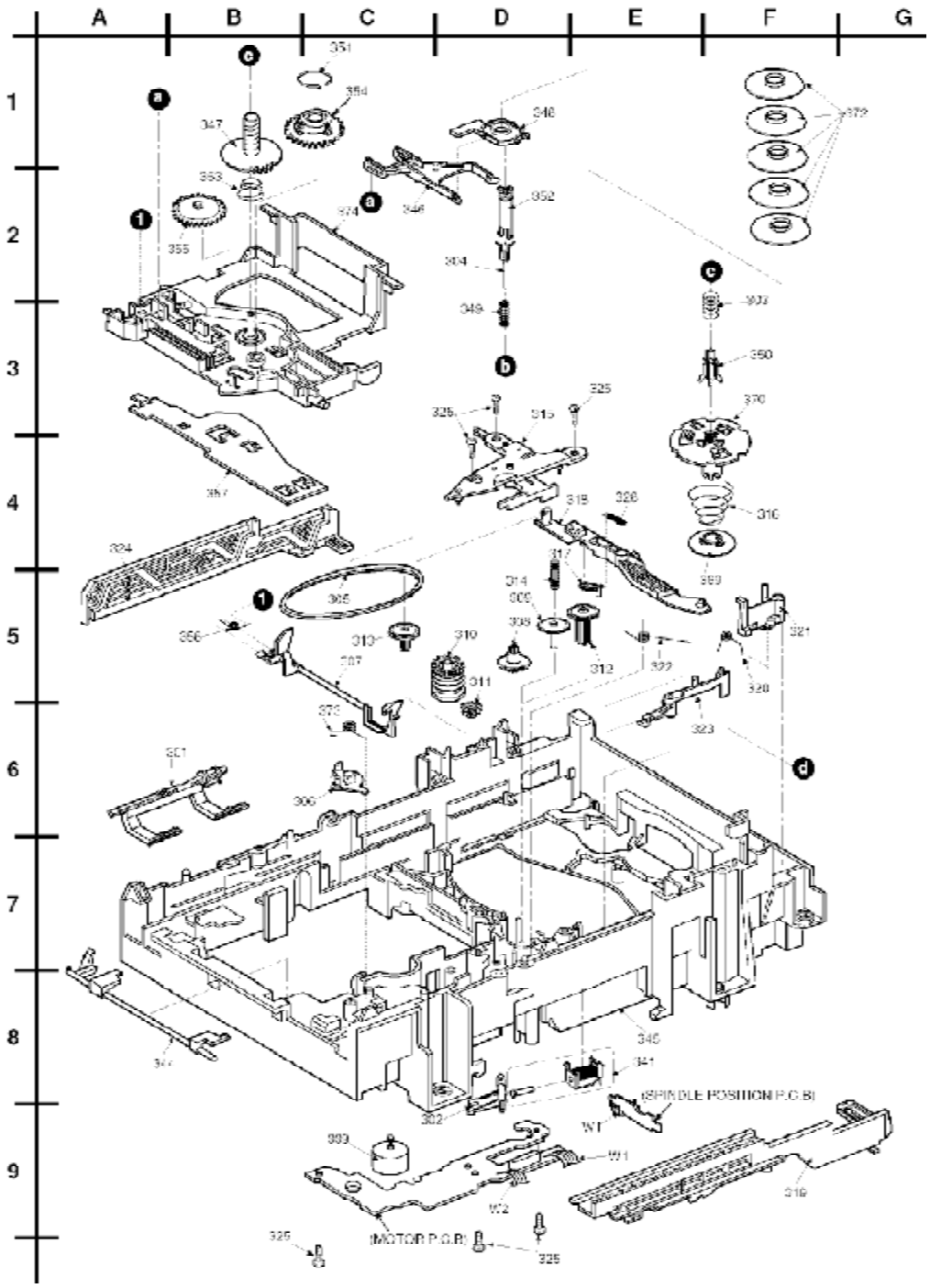


19.1.2. Deck Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK	
101	RED0059	R/P HEAD BLOCK UNIT	[M]
103	RDG0300	REEL BASE GEAR	[M]
104	RDG0301	WINDING RELAY GEAR	[M]
105	RDK0026	MAIN GEAR	[M]
107	RDV0033-4	WINDING BELT	[M]
108	RDV0034-1	CAPSTAN BELT 'A'	[M]
110	RMB0312	TRIGGER LEVER SPRING	[M]
111	RMB0400	REEL SPRING	[M]
112	RMB0403	HEAD PANEL SPRING	[M]
113	RMB0404	BRAKE ROD SPRING	[M]
114	RMB0406	FR LEVER SP	[M]
115	RMB0408	THRUST SPRING	[M]
116	RML0370	TRIGGER LEVER	[M]
117	RML0371	FR LEVER	[M]
118	RML0372	WINDING LEVER	[M]
119	RML0374	EJECT LEVER	[M]
120	RMM0131	BRAKE ROD	[M]
121	RMM0133-1	EJECT ROD	[M]
122	RMQ0519	REEL HUB	[M]
123	RMS0398-1	MOVING CORE	[M]
124	RSJ0003	PLUNGER	[M]
125	RMC0061	PACK SPRING	[M]
126	RXF0049	FLYWHEEL 'F' ASS'Y	[M]
127	RXF0050	FLYWHEEL 'R' ASS'Y	[M]
128	RXG0040	FF RELAY GEAR ASS'Y	[M]
129	RMK0283A-J	SUB CHASSIS	[M]
130	RXL0124	PINCH ARM 'F' ASS'Y	[M]
130-1	RMB0401	PINCH ARM SPRING 'F'	[M]
131	RXL0125	PINCH ARM 'R' ASS'Y	[M]
131-1	RMB0402	PINCH ARM SPRING 'R'	[M]
132	RXL0126	WINDING ARM ASS'Y	[M]
133	RXQ0412	HEAD PANEL ASS'Y	[M]
133-1	RMB0405	FR ROD SPRING	[M]
133-2	RMM0132	FR ROD	[M]
134	REM0098	CAP MOTOR ASS'Y	[M]
135	RHD26022	MOTOR SCREW	[M]
136	XTW2+5L	HEAD BLOCK UNIT SCRE	[M]
137	XTW26+10S	SUB-CHASSIS SCREW	[M]
138	XYC2+JF17	PCB EARTH SCREW	[M]
139	RFKJSTR280PP	MAIN CHASSIS ASS'Y	[M]

19.2. CD Loading Mechanism (RD-DAC026-S)

19.2.1. CD Loading Mechanism Parts Location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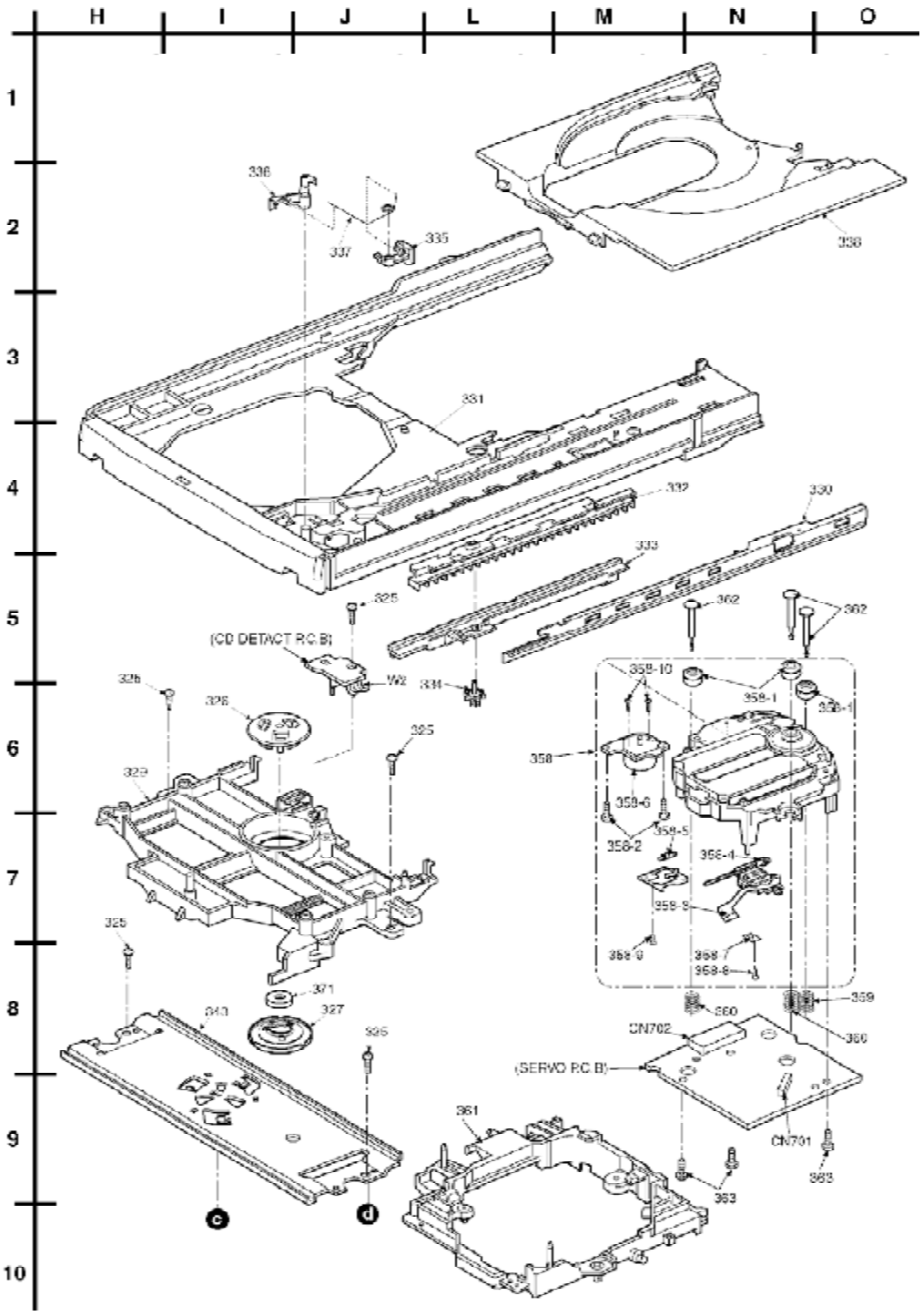
(SPINDLE POSITION P.C.B)
(MOTOR P.C.B)



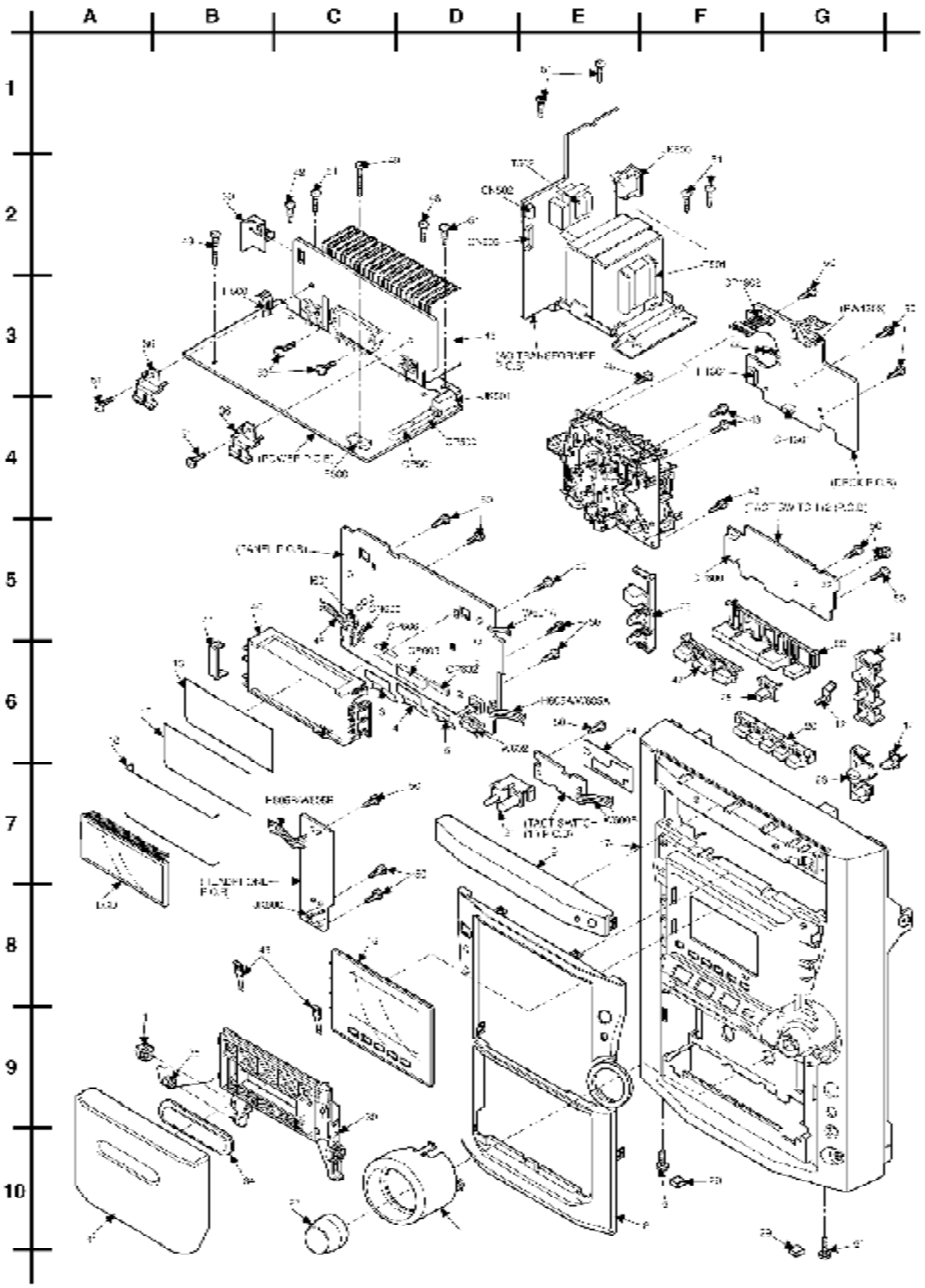
19.2.2. CD Loading Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		TRAVERSE DECK	
301	RML0517	TIMING LEVER	[M]
302	RML0516	PLUNGER LEVER	[M]
303	RMB0551	UPPER SPINDLE SPRING	[M]
304	RMQ0744	LOWER HOOK	[M]
305	RDV0056	BELT	[M]
306	RML0525	FRONT LOCK LEVER	[M]
307	RML0526	DISC LEVER	[M]
308	RDG0424	DRIVE GEAR	[M]
309	RDG0425	CHANGE GEAR	[M]
310	RDG0427	TRAVERSE CAM GEAR	[M]
311	RDG0428	TRAVERSE RELAY GEAR	[M]
312	RDG0426	UP/DOWN GEAR	[M]
313	RDG0429	PULLEY GEAR	[M]
314	RMB0549-1	CHANGE GEAR SPRING	[M]
315	RMQ0748	PITCH PLATE	[M]
316	RMB0553	PUSH SPRING	[M]
317	RML0530	ASSIST LEVER	[M]
318	RML0518	CONNECTION LEVER	[M]
319	RMM0201	SLIDE PLATE 1	[M]
320	RME0258	REAR LOCK SPRING	[M]
321	RML0521	REAR LOCK	[M]
322	RME0257	TRAY LOCK LEVER SPRI	[M]
323	RML0520	TRAY LOCK	[M]
324	RMM0202	SLIDE PLATE 2	[M]
325	XTB3+10J	SCREW	[M]
326	RMR0334	FIXED PLATE	[M]
327	RMR0624-W2	CLAMPER	[M]
328	RMB0561	ASSIST LEVER SPRING	[M]
329	RMR1121-K	MECHA COVER	[M]
330	RMA1110-2	TRAY ANGLE	[M]
331	RMR1122-H1	TRAY BASE	[M]
332	RMM0204	CARRIER	[M]
333	RMM0203	DRIVE RACK	[M]
334	RDG0432	SPEED UP GEAR	[M]
335	RML0524	SLIDE LOCK	[M]
336	RML0523	CARRIER LOCK	[M]
337	RME0260-1	SLIDE LOCK SPRING	[M]
338	RMR1123-H	TRAY	[M]
339	RXQ0595	MOTOR SUB ASS'Y	[M]
341	RSJ0003	SOLENOLD ASS'Y	[M]
343	RMA1106	UPPER PLATE	[M]
344	RML0519	8CD LEVER	[M]
345	RFKNAAK27GCS	MECHA BASE ASS'Y	[M]
346	RML0522	TURNING STOPPER	[M]
347	RMQ0745	LOWER SPINDLE	[M]
348	RMQ0746	UP/DOWN BASE	[M]
349	RMB0550	LOWER SPINDLE SPRING	[M]
350	RMQ0747	UPPER HOOK	[M]
351	RME0263	CLICK SPRING	[M]
352	RMQ0743	SPINDLE SHAFT	[M]
353	RMB0552	CUSHION SPRING	[M]
354	RDG0430	RELAY GEAR 'A'	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
355	RDG0431	RELAY GEAR 'B'	[M]
356	RME0262	DISK LEVER SP.	[M]
357	RMA1105	SUPPORT PLATE	[M]
358	RAE0152Z-3	TRAVERSE	[M]
358-1	SHGD113-1	FLOATING CUSHION	[M]
358-10	XQS17+A35FZ	TRAVERSE MOTOR SCREW	[M]
358-2	SNSD38	TRV MOTOR ASSY SCREW	[M]
358-3	RAF0150A-4S	50A OPTICAL PICKUP	[M]
358-4	RDG0247	DRIVE GEAR	[M]
358-5	RDG0248	RELAY GEAR	[M]
358-6	RXQ0339	TRAVERSE MOTOR ASSY	[M]
358-7	RXQ0304-1	NUT PLATE ASSY	[M]
358-8	XQN17+CG5	NUT PLATE ASSY SCREW	[M]
358-9	XQS2+A3FZ	SPINDLE MOTOR SCREW	[M]
359	RME0142	FLOATING SPRING A	[M]
360	RME0109	FLOATING SPRING B	[M]
361	RMR1124-K1	TRAVERSE CHASSIS	[M]
362	RMS0632	TRAVERSE PIN	[M]
363	XTN2+6G	SCREW	[M]
369	RMX0141	PUSH SPACER	[M]
370	RMQ0749	UPPER SPINDLE	[M]
371	RHM0001	MAGNET	[M]
372	RMX0140	DISC SPACER	[M]
373	RME0261	FRONT LOCK SPRING	[M]
374	RMQ0742	SPINDLE BASE	[M]

19.3. Cabinet

19.3.1. Cabinet Parts Location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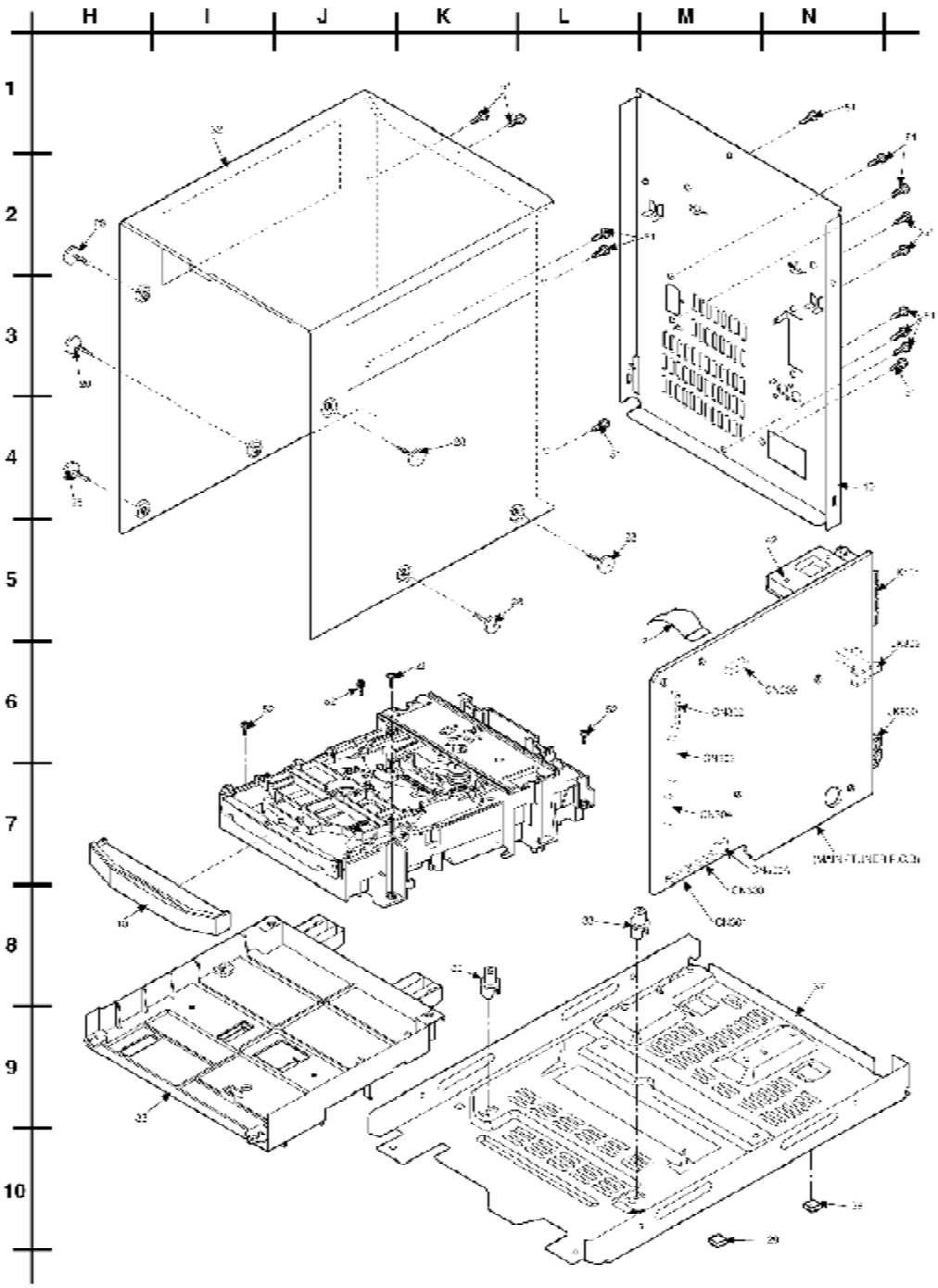


19.3.2. Cabinet Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RDG0357	DUMPER GEAR	[M]
2	REEX0105	14P FFC (CD-TO-MAIN)	[M]
3	REEX0106	19P FFC(CD-TO-PANEL)	[M]
4	REEX0107	20P FFC	[M]
5	REEX0108	24P FFC	[M]
8	RGKX0073-K	FRONT ORNAMENT (BTM)	[M]
9	RGKX0074D-K	FRONT ORNAMENT TOP	[M]
10	RGKX0072-K	CD LID	[M]
11	RGKX0080-K	VOLUME RING ORNAMENT	[M]
12	RGLX0031-Q	POWER LIGHTING CHIP	[M]
13	RGLX0032-Q	LCD LIGHTING PANEL	[M]
14	RGLX0035-Q	AMAZING BTN L.CHIP	[M]
15	RGPX0039	LCD FILTER SHEET	[M]
16	RGPX0040C-Q	LCD WINDOW	[M]
17	RGPX0041B-K	FRONT PANEL	[M]
18	RGPX0050	LCD FILTER SHEET	[M]
19	RGRX0018A-D	REAR PANEL	[M]
20	RGUX0383-K	CD BUTTON	[M]
21	RGUX0384-K	CD MANAGER BUTTON	[M]
22	RGUX0385-1S	DECK BUTTON	[M]
23	RGUX0388-K	POWER BUTTON	[M]
24	RGUX0389-K	REV/REC MODE BUTTON	[M]
25	RGUX0390-1S	SELECTOR BUTTON	[M]
26	RGUX0391-K	AMAZING BUTTON	[M]
27	RGWX0057-1S	VOLUME KNOB	[M]
28	RHD30002-K	SCREW	[M]
29	RKA0059-K	LEG FELT	[M]
30	RKF0479-K3	CASS HOLDER	[M]
31	RKFX0087-K	CASS LID	[M]
32	RKMX0058-K	TOP CABINET	[M]
33	RKQ0089A	PCB SUPPORT	[M]
34	RKWX0150-Q	CASSETTE WINDOW	[M]
35	RMB0477-1	CASS OPEN SPRING	[M]
36	RMC0158-S	TRANSISTOR HOLDER	[M]
37	RMKX0046	BOTTOM CHASSIS	[M]
38	RMKX0047-K	CD CHASSIS	[M]
39	RMNX0040	HEAT SINK SPACER	[M]
40	RMNX0041-W1	LCD HOLDER	[M]
41	RMNX0056-K	LED COVER	[M]
42	RSC0027-L	SHIELD CASE	[M]
43	RUS757ZAA	CASS HALF SPRING	[M]
44	RWJ0102050KR	MOTOR WIRE	[M]
45	RWJ1109110RX	4P PANEL TO TRANS	[M]
46	RXXX0022	HEAT SINK UNIT	[M]
47	RYQX0044-S	FUNCTION BUTTON UNIT	[M]
48	XTB3+10JFZ	SCREW	[M]
49	XTB3+20JFZ	SCREW	[M]
50	XTBS26+10J	SCREW	[M]
51	XTBS3+8JFZ1	SCREW	[M]
52	XTW3+12T	SCREW	[M]
53	XTW3+15T	SCREW	[M]
54	RMNX0057	PCB SUPPORT	[M]

19.4. Electrical Parts List

Ref. No.	Part No.	Part Name & Descritpion	Remarks
		PRINTED CIRCUITS BOARDS	
	REPX0192D	CD SERVO P.C.B.	[M]RTL
	REPX0236A	MAIN/TUNER P.C.B., PANEL P.C.B., TACT SWITCH (1) P.C.B., TACT SWITCH (2) P.C.B., HEADPHONE P.C.B.	[M]RTL
	REPX0240A	DECK P.C.B.	[M]RTL
	REPX0108	DECK MECHANISM P.C.B.	[M]RTL
	REP2578A-N	MOTOR P.C.B., CD DETECT P.C.B., SPINDLE POSITION P.C.B.	[M]RTL
	REP1999B	TUNER PACK P.C.B.	[M]RTL
	REPX0237A	POWER P.C.B., AC TRANSFORMER P.C.B.	[M]RTL
		INTEGRATED CIRCUITS	
IC1	TA7291P	IC DRIVE	[M]
IC101	LA1833NMNTLM	IC IF & MPX	[M]
IC102	LC72131MDTRM	IC PLL	[M]
IC301	BH3874AKS2	IC ASP	[M]
IC302	C0AABB000055	IC BUFFER AMP	[M]
IC501	RSN35H1A-P	IC POWER	[M]
IC600	M38258MCM084	IC MICRO P	[M]
IC601	BU2090AF-E2	IC I/O EXPANDER	[M]
IC701	AN8885SBE1	IC RFAMP	[M]
IC702	MN662790RSC	IC LSI	[M]
IC703	AN8739SBE2	IC 4CH DRIVER	[M]
IC971	0N2180RLC1	IC PHOTO INTERUPTOR	[M]
IC1000	C1AA00000612	IC ANALOG SW	[M]
IC1001	AN7326K	IC DECK R/P	[M]
		TRANSISTORS	
Q1	2SK544F-AC	TRANSISTOR	[M]
Q1	RVTDTC143EST	TRANSISTOR	[M]
Q2	B1AAAC000011	TRANSISTOR	[M]
Q3	B1AAAD000013	TRANSISTOR	[M]
Q4	B1AAAD000013	TRANSISTOR	[M]
Q101	2SC2058SPTA	TRANSISTOR	[M]
Q106	KRA102MTA	TRANSISTOR	[M]
Q200	KTD1304TA	TRANSISTOR	[M]
Q201	KTC3875GRTA	TRANSISTOR	[M]
Q202	KTC3875GRTA	TRANSISTOR	[M]
Q250	KTD1304TA	TRANSISTOR	[M]
Q306	KRA102STA	TRANSISTOR	[M]
Q307	KRC111STA	TRANSISTOR	[M]
Q309	KRC102STA	TRANSISTOR	[M]
Q350	2SB621ARSTA	TRANSISTOR	[M]
Q351	KRC102STA	TRANSISTOR	[M]
Q400	KTD1304TA	TRANSISTOR	[M]
Q450	KTD1304TA	TRANSISTOR	[M]
Q501	KTC2026	TRANSISTOR	[M] ⚠
Q502	KTA1046	TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
Q503	KTA12710YTA	TRANSISTOR	[M]
Q504	KTA1046	TRANSISTOR	[M]
Q505	KTC3199GRTA	TRANSISTOR	[M]
Q506	KTA1267GRTA	TRANSISTOR	[M] ⚠
Q507	KTC3199GRTA	TRANSISTOR	[M]
Q508	KTC3199GRTA	TRANSISTOR	[M] ⚠
Q509	KRA110MTA	TRANSISTOR	[M]
Q510	KRA110MTA	TRANSISTOR	[M]
Q514	KTC2026	TRANSISTOR	[M] ⚠
Q515	KTC3199GRTA	TRANSISTOR	[M]
Q516	KTC3199GRTA	TRANSISTOR	[M]
Q517	KTC32030YTA	TRANSISTOR	[M] ⚠
Q519	KTC3199GRTA	TRANSISTOR	[M]
Q575	KTC3199GRTA	TRANSISTOR	[M]
Q577	2SC3940ARA	TRANSISTOR	[M]
Q578	KRC102MTA	TRANSISTOR	[M]
Q607	KRC103STA	TRANSISTOR	[M]
Q608	KTC3199GRTA	TRANSISTOR	[M]
Q609	KTC3199GRTA	TRANSISTOR	[M]
Q610	KTA1504GRTA	TRANSISTOR	[M]
Q611	KRC102STA	TRANSISTOR	[M]
Q701	2SA1037AKSTX	TRANSISTOR	[M]
Q901	KRC101MTA	TRANSISTOR	[M]
Q902	KRC101MTA	TRANSISTOR	[M]
Q903	KRC101MTA	TRANSISTOR	[M]
Q1101	2SD14500SA	TRANSISTOR	[M]
Q1103	2SD14500SA	TRANSISTOR	[M]
Q1201	2SD14500SA	TRANSISTOR	[M]
Q1203	2SD14500SA	TRANSISTOR	[M]
Q1302	KRA102MTA	TRANSISTOR	[M]
Q1304	KRA102MTA	TRANSISTOR	[M]
Q1306	KTC3199GRTA	TRANSISTOR	[M]
Q1307	KTC3199GRTA	TRANSISTOR	[M]
Q1308	KRC114MTA	TRANSISTOR	[M]
Q1309	KTC3199GRTA	TRANSISTOR	[M]
Q1310	KTC3199GRTA	TRANSISTOR	[M]
Q1312	KTC3199GRTA	TRANSISTOR	[M]
Q1313	2SC1845FTA	TRANSISTOR	[M]
Q1314	KRA102MTA	TRANSISTOR	[M]
Q1315	KTA12710YTA	TRANSISTOR	[M]
Q1316	2SD09650RA	TRANSISTOR	[M]
Q1317	2SC2001LTA	TRANSISTOR	[M]
Q1321	KRC119MTA	TRANSISTOR	[M]
Q1322	KRA102MTA	TRANSISTOR	[M]
		DIODES	
D1	B0CAAD000002	DIODE	[M]
D1	GP1S94	DIODE	[M]
D2	B0CAAD000002	DIODE	[M]
D2	MTZJ4R7BTA	DIODE	[M]
D3	B0CAAD000002	DIODE	[M]
D101	UDZSTE175R1B	DIODE	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
D306	DAP202KT146	DIODE	[M]
D307	DAP202KT146	DIODE	[M]
D308	B0ACCK000005	DIODE	[M]
D309	B0ACCK000005	DIODE	[M]
D312	RL1N4003S-P	DIODE	[M]
D316	RL1N4003S-P	DIODE	[M]
D317	RL1N4003S-P	DIODE	[M]
D318	RL1N4003S-P	DIODE	[M]
D319	MA2J72800L	DIODE	[M]
D363	B0ACCK000005	DIODE	[M]
D501	1N5402BM21	DIODE	[M] ⚠
D502	1N5402BM21	DIODE	[M] ⚠
D503	1N5402BM21	DIODE	[M] ⚠
D504	1N5402BM21	DIODE	[M] ⚠
D508	MTZJ15BTA	DIODE	[M]
D515	B0BA9R600002	DIODE	[M] ⚠
D516	B0AACK000004	DIODE	[M]
D517	B0BA5R600016	DIODE	[M]
D520	B0BA9R600002	DIODE	[M]
D524	MTZJ15CTA	DIODE	[M] ⚠
D525	B0AACK000004	DIODE	[M]
D526	B0AACK000004	DIODE	[M]
D527	B0AACK000004	DIODE	[M]
D528	B0AACK000004	DIODE	[M]
D539	RL1N4003S-P	DIODE	[M]
D540	RL1N4003S-P	DIODE	[M]
D541	RL1N4003S-P	DIODE	[M]
D577	B0AACK000004	DIODE	[M]
D578	RL1N4003S-P	DIODE	[M]
D579	RL1N4003S-P	DIODE	[M]
D580	RL1N4003S-P	DIODE	[M]
D581	RL1N4003S-P	DIODE	[M]
D582	B0BA6R600008	DIODE	[M] ⚠
D584	RL1N4003S-P	DIODE	[M]
D587	RL1N4003S-P	DIODE	[M]
D588	RL1N4003S-P	DIODE	[M]
D589	RL1N4003S-P	DIODE	[M]
D600	LNJ801TPSJA	DIODE	[M]
D601	SLI343YC3F	DIODE	[M]
D602	SLI343YC3F	DIODE	[M]
D603	SLI343YC3F	DIODE	[M]
D604	SLI343YC3F	DIODE	[M]
D605	SLI343YC3F	DIODE	[M]
D606	SLI343YC3F	DIODE	[M]
D607	SLI325URCT31	DIODE	[M]
D627	1SS380TE-17	DIODE	[M]
D628	1SS380TE-17	DIODE	[M]
D630	RB751V-40	DIODE	[M]
D638	B0ACCK000005	DIODE	[M]
D640	RB501V-40	DIODE	[M]
D641	RB501V-40	DIODE	[M]
D642	RB501V-40	DIODE	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
D643	B0ACCK000005	DIODE	[M]
D644	B0ACCK000005	DIODE	[M]
D645	B0ACCK000005	DIODE	[M]
D646	RB501V-40	DIODE	[M]
D647	RB501V-40	DIODE	[M]
D648	B0ACCK000005	DIODE	[M]
D649	B0ACCK000005	DIODE	[M]
D971	MA165TA	DIODE	[M]
D1301	B0AACK000004	DIODE	[M]
		VARIABLE RESISTORS	
VR600	RRV12E24404A	VOLUME JOG	[M]
		SWITCHES	
S601	EVQ21405RJ	SW POWER	[M]
S602	EVQ21405RJ	SW CLOCK/TIMER	[M]
S603	EVQ21405RJ	SW REC/PLAY/DEMO	[M]
S604	EVQ21405RJ	SW DISC 1	[M]
S605	EVQ21405RJ	SW DISC 2	[M]
S606	EVQ21405RJ	SW DISC 3	[M]
S607	EVQ21405RJ	SW DISC 4	[M]
S608	EVQ21405RJ	SW DISC 5	[M]
S610	EVQ21405RJ	SW TUNER/BAND	[M]
S611	EVQ21405RJ	SW TAPE PLAY	[M]
S612	EVQ21405RJ	SW CD PAUSE	[M]
S613	EVQ21405RJ	SW SELECTOR	[M]
S614	EVQ21405RJ	SW STOP	[M]
S615	EVQ21405RJ	SW TUNE UP/FF	[M]
S616	EVQ21405RJ	SW TUNE MODE	[M]
S617	EVQ21405RJ	SW TUNE DOWN/REW	[M]
S618	EVQ21405RJ	SW CD OPEN/CLOSE	[M]
S619	EVQ21405RJ	SW CD MANAGER	[M]
S620	EVQ21405RJ	SW TAPE EJECT	[M]
S621	EVQ21405RJ	SW REV MODE	[M]
S622	EVQ21405RJ	SW TAPE EJECT	[M]
S623	EVQ21405RJ	SW REV MODE	[M]
S624	EVQ21405RJ	SW REC STOP	[M]
S701	RSH1A043-U	SW REST	[M]
S971	RSH1A018-3U	SW MODE	[M]
S972	RSH1A019-2U	SW LEAF	[M]
S973	RSH1A019-2U	SW LEAF	[M]
S974	RSH1A019-2U	SW LEAF	[M]
S975	RSH1A019-2U	SW LEAF	[M]
SW1	RSH1A032-U	SW SLIDE	[M]
SW2	RSH1A032-U	SW SLIDE	[M]
SW3	RSH1A005-1U	SW	[M]
SW4	RSH1A91ZA-A	SW	[M]
SW5	RSP1A017-A	SW LOWER	[M]
		CONNECTORS	
CN1	RJS1A9414	14P CONNECTOR	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
CN300	RJU100W09	9P CONNECTOR	[M]
CN301	RJU100W09	9P CONNECTOR	[M]
CN302	K1MN24A00030	24P FFC CONNECTOR	[M]
CN303	RJS1A9420	20P FFC TO MAIN	[M]
CN304	K1MP09A00002	TO MAIN MOLEX	[M]
CN309	K1MN14A00049	FF CONNECTOR	[M]
CN500A	K1KA04B00058	CONNECTOR	[M]
CN502	RJP4G18ZA	TAPE HEAD CONNECTOR	[M]
CN503	K1KA05B00108	5P CONNECTOR	[M]
CN600	RJT066H05B	5P B/B CONNECTOR	[M]
CN701	RJS2A8616	16P FPC CONNECTOR	[M]
CN702	RJS1A6719-1Q	19P FFC CONNECTOR	[M]
CN1303	K1MP10B00007	PLL-TU OLEX	[M]
CP500	RJT100W09	9P CONNECTOR	[M]
CP501	RJT100W09	9P CONNECTOR	[M]
CP600	K1KB05C00003	5P B/B CONNECTOR	[M]
CP602	RJS2A5724	FFC CONNECTOR	[M]
CP605	RJS1A9320	20P FFC TO MAIN	[M]
CP606	K1MN19C00001	CONNECTOR	[M]
CP1301	RJS1A6805-J	CONNECTOR	[M]
CP1902	K1KA09B00058	CONNECTOR	[M]
CS971	RJU071H09M1	CONNECTOR	[M]
		COILS & TRANSFORMERS	
L1	RLQZP1R2JT-Y	RF CHOKE COIL	[M]
L2	G0CR47KA0029	RF CHOKE COIL	[M]
L102	RLQB1R0KTD-D	INDUCTOR	[M]
L600	RLQB101JTD-D	INDUCTOR	[M]
L601	G0C100JA0030	INDUCTOR	[M]
L602	RLQB101JTD-D	INDUCTOR	[M]
L603	RLQB3R3JTD-D	COIL	[M]
L1301	7L1A62N	BIAS OCS COIL	[M]
L1303	G0C470JA0019	AXIAL COIL	[M]
T501	RTP1M3C019-T	MAIN TRANSFORMER	[M]
T502	RTP1I3E002-V	BACK-UP TRANSFORMER	[M]
		COMPONENT COMBINATION	
Z101	RLA2Z005-C	AM COIL	[M]
Z102	RLI2Z021M-T	AM IF BLOCK	[M]
Z501	ERZV10V511CS	ZENER	[M] ⚠
Z600	RSL5268-L	LCD	[M]
Z602	B3RAD0000014	REMOTE SENSOR	[M]
Z971	EXBF7L355SYV	RADA RESISTOR	[M]
		CERAMIC FILTERS	
CF201	J0B1075A0061	CERAMIC FILTER	[M]
CF202	J0B1075A0061	CERAMIC FILTER	[M]
		RELAY	

Ref. No.	Part No.	Part Name & Descritpion	Remarks
RL502	RSY0056M-C	RELAY	[M] ⚠
		OSCILLATORS	
X102	RLFDFT22DD	CRYSTAL OSCILLATOR	[M]
X103	H0H720400005	CRYSTAL OSCILLATOR	[M]
X600	RSXZ8M00D03	CERAMIC RESONATOR	[M]
X601	RSXD32K7S02	CRYSTAL OSCILLATOR	[M]
X701	RSXZ16M9M01T	CERAMIC OSCILLATOR	[M]
		FUSES	
F1	XBA1C20NBAL	FUSE	[M] ⚠
		FUSE HOLDERS	
FC1	EYF52BC	FUSE HOLDER	[M]
FC2	EYF52BC	FUSE HOLDER	[M]
		FUSE PROTECTOR	
FP579	RSFMB40KT-L	FUSE PROTECTOR	[M] ⚠
		HOLDERS	
H500	K1YF05000002	WIRE HOLDER	[M]
H600	RMR0319	10P CABLE HOLDER	[M]
H601	RMR0313	CABLE HOLDER	[M]
H605A	RMR0315	6P WIRE HOLDER	[M]
H605B	RMR0315	6P WIRE HOLDER	[M]
H1304	RMR0318	9P WIRE HOLDER	[M]
		JACKS	
JK101	RJH5414-1	JK ANTENNA	[M]
JK305	RJH2213N-1	JK 2PIN RCA PIN	[M]
JK500	RJR0054E-L	JK SPEAKER TERMINA	[M]
JK500	SJSD16-J	JK AC INLET	[M]
JK501	K1KB04A00035	JK B/B CONNECTOR	[M]
JK600	RJJ37TK07-X	JK HEADPHONE	[M]
		EARTH TERMINAL	
E500	SNE1004-2	EARTH TERMINAL	[M]
		WIRES	
W1	REZ1023-1	4P WIRE	[M]
W2	REZ1024	3P WIRE	[M]
W500	REXX0241	5P POWER TO TRANS	[M]
W600	RWJ0103100SS	3P PANEL TO PANEL	[M]
W601	REXX0240	4P PANEL TO TRANS	[M]
W602	RWJ1110140XX	10P PANEL TO DECK	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
W605	RWJ0206130XX	6P PANEL TO HEADP	[M]
		RESISTORS	
R1	ERDS2TJ102T	1K 1/4W	[M]
R1	ERDS2TJ104T	100K 1/4W	[M]
R2	ERDS2TJ104T	100K 1/4W	[M]
R3	ERDS2TJ221T	220 1/4W	[M]
R4	ERDS2TJ104T	100K 1/4W	[M]
R5	ERDS2TJ564T	560K 1/4W	[M]
R6	ERDS2TJ391T	390 1/4W	[M]
R7	ERDS2TJ272T	2.7K 1/4W	[M]
R8	ERDS2TJ684T	680K 1/4W	[M]
R9	ERDS2TJ391T	390 1/4W	[M]
R10	ERDS2TJ391T	390 1/4W	[M]
R11	ERDS2TJ684T	680K 1/4W	[M]
R101	ERJ3GEY0R00V	0 1/16W	[M]
R102	ERJ3GEYJ472V	4.7K 1/16W	[M]
R103	ERJ3GEYJ271V	270 1/16W	[M]
R104	ERJ3GEYJ102V	1K 1/16W	[M]
R105	ERJ3GEYJ471V	470 1/16W	[M]
R106	ERJ3GEYJ474V	470K 1/16W	[M]
R107	ERJ3GEYJ331V	330 1/16W	[M]
R110	ERJ3GEYJ102V	1K 1/16W	[M]
R111	ERJ3GEYJ391V	390 1/16W	[M]
R112	ERJ3GEYJ104V	100K 1/16W	[M]
R113	ERJ3GEYJ103V	10K 1/16W	[M]
R114	ERJ3GEYJ562V	5.6K 1/16W	[M]
R115	ERJ3GEYJ561V	560 1/16W	[M]
R116	ERJ3GEYJ102V	1K 1/16W	[M]
R117	ERJ3GEYJ473V	47K 1/16W	[M]
R118	ERJ3GEYJ332V	3.3K 1/16W	[M]
R119	ERJ3GEYJ472V	4.7K 1/16W	[M]
R120	ERJ3GEYJ473V	47K 1/16W	[M]
R121	ERJ3GEYJ223V	22K 1/16W	[M]
R122	ERJ3GEYJ272V	2.7K 1/16W	[M]
R123	ERJ3GEYJ683V	68K 1/16W	[M]
R124	ERJ3GEYJ330V	33 1/16W	[M]
R125	ERJ3GEYJ471V	470 1/16W	[M]
R126	ERJ3GEYJ102V	1K 1/16W	[M]
R127	ERJ3GEYJ471V	470 1/16W	[M]
R128	ERJ3GEYJ820V	82 1/16W	[M]
R129	ERJ3GEYJ273V	27K 1/16W	[M]
R130	ERJ3GEYJ103V	10K 1/16W	[M]
R131	ERJ3GEYJ680V	68 1/16W	[M]
R132	ERJ3GEYJ103V	10K 1/16W	[M]
R133	ERJ3GEYJ102V	1K 1/16W	[M]
R134	ERJ3GEYJ471V	470 1/16W	[M]
R135	ERJ3GEYJ102V	1K 1/16W	[M]
R136	ERJ3GEYJ102V	1K 1/16W	[M]
R137	ERJ3GEYJ102V	1K 1/16W	[M]
R138	ERJ3GEYJ332V	3.3K 1/16W	[M]
R141	ERJ3GEYJ682V	6.8K 1/16W	[M]
R142	ERJ3GEYJ682V	6.8K 1/16W	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
R143	ERJ3GEYJ223V	22K 1/16W	[M]
R145	ERJ3GEYJ104V	100K 1/16W	[M]
R146	ERJ3GEYJ104V	100K 1/16W	[M]
R151	ERJ3GEYJ820V	82 1/16W	[M]
R152	ERJ3GEY0R00V	0 1/16W	[M]
R201	ERJ3GEYJ103V	10K 1/16W	[M]
R202	ERJ3GEYJ222V	2.2K 1/16W	[M]
R207	ERJ3GEY0R00V	0 1/16W	[M]
R209	ERJ3GEYJ223V	22K 1/16W	[M]
R210	ERJ3GEYJ222V	2.2K 1/16W	[M]
R211	ERJ3GEYJ682V	6.8K 1/16W	[M]
R212	ERJ3GEYJ682V	6.8K 1/16W	[M]
R213	ERJ3GEYJ183V	18K 1/16W	[M]
R214	ERJ3GEYJ104V	100K 1/16W	[M]
R215	ERJ3GEYJ102V	1K 1/16W	[M]
R216	ERJ3GEYJ104V	100K 1/16W	[M]
R220	ERJ3GEYJ104V	100K 1/16W	[M]
R221	ERJ3GEYJ102V	1K 1/16W	[M]
R222	ERJ3GEYJ472V	4.7K 1/16W	[M]
R223	ERJ3GEYJ473V	47K 1/16W	[M]
R224	ERJ3GEYJ153V	15K 1/16W	[M]
R225	ERJ3GEYJ682V	6.8K 1/16W	[M]
R226	ERJ3GEYJ102V	1K 1/16W	[M]
R227	ERJ3GEYJ682V	6.8K 1/16W	[M]
R228	ERJ3GEYJ102V	1K 1/16W	[M]
R248	ERJ3GEYJ820V	82 1/16W	[M]
R249	ERJ3GEYJ820V	82 1/16W	[M]
R251	ERJ3GEYJ820V	82 1/16W	[M]
R252	ERJ3GEYJ820V	82 1/16W	[M]
R300	ERJ3GEYJ472V	4.7K 1/16W	[M]
R301	ERJ3GEYJ102V	1K 1/16W	[M]
R313	ERJ3GEYJ393V	39K 1/16W	[M]
R316	ERJ3GEYJ153V	15K 1/16W	[M]
R327	ERJ3GEYJ154V	150K 1/16W	[M]
R328	ERJ3GEYJ683V	68K 1/16W	[M]
R331	ERJ3GEYJ104V	100K 1/16W	[M]
R332	ERJ3GEYJ123V	12K 1/16W	[M]
R333	ERJ3GEYJ104V	100K 1/16W	[M]
R334	ERJ3GEYJ123V	12K 1/16W	[M]
R335	ERJ3GEYJ102V	1K 1/16W	[M]
R336	ERJ3GEYJ102V	1K 1/16W	[M]
R337	ERJ3GEYJ104V	100K 1/16W	[M]
R338	ERJ3GEYJ563V	56K 1/16W	[M]
R339	ERJ3GEYJ273V	27K 1/16W	[M]
R340	ERJ3GEYJ273V	27K 1/16W	[M]
R345	ERJ3GEYJ221V	220 1/16W	[M]
R346	ERJ3GEYJ223V	22K 1/16W	[M]
R347	ERJ3GEYJ123V	12K 1/16W	[M]
R349	ERJ3GEYJ103V	10K 1/16W	[M]
R350	ERJ3GEYJ102V	1K 1/16W	[M]
R351	ERJ3GEYJ103V	10K 1/16W	[M]
R353	ERJ3GEYJ103V	10K 1/16W	[M]
R354	ERJ3GEYJ123V	12K 1/16W	[M]
R355	ERJ3GEYJ223V	22K 1/16W	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
R358	ERJ3GEYJ473V	47K 1/16W	[M]
R359	ERJ3GEYJ473V	47K 1/16W	[M]
R367	ERJ3GEYJ273V	27K 1/16W	[M]
R368	ERJ3GEYJ103V	10K 1/16W	[M]
R369	ERJ3GEYJ103V	10K 1/16W	[M]
R371	ERJ3GEYJ472V	4.7K 1/16W	[M]
R372	ERJ3GEYJ103V	10K 1/16W	[M]
R373	ERJ3GEYJ153V	15K 1/16W	[M]
R374	ERJ3GEYJ683V	68K 1/16W	[M]
R375	ERJ3GEYJ683V	68K 1/16W	[M]
R376	ERJ3GEYJ153V	15K 1/16W	[M]
R377	ERJ3GEYJ223V	22K 1/16W	[M]
R378	ERJ3GEYJ823V	82K 1/16W	[M]
R379	ERJ3GEYJ472V	4.7K 1/16W	[M]
R380	ERJ3GEYJ102V	1K 1/16W	[M]
R381	ERJ3GEYJ823V	82K 1/16W	[M]
R382	ERJ3GEYJ394V	390K 1/16W	[M]
R383	ERJ3GEYJ332V	3.3K 1/16W	[M]
R384	ERJ3GEYJ394V	390K 1/16W	[M]
R385	ERJ3GEYJ473V	47K 1/16W	[M]
R401	ERJ3GEYJ103V	10K 1/16W	[M]
R402	ERJ3GEYJ222V	2.2K 1/16W	[M]
R407	ERJ3GEY0R00V	0 1/16W	[M]
R409	ERJ3GEYJ223V	22K 1/16W	[M]
R410	ERJ3GEYJ222V	2.2K 1/16W	[M]
R411	ERJ3GEYJ682V	6.8K 1/16W	[M]
R412	ERJ3GEYJ682V	6.8K 1/16W	[M]
R413	ERJ3GEYJ183V	18K 1/16W	[M]
R415	ERJ3GEYJ102V	1K 1/16W	[M]
R420	ERJ3GEYJ104V	100K 1/16W	[M]
R421	ERJ3GEYJ102V	1K 1/16W	[M]
R422	ERJ3GEYJ472V	4.7K 1/16W	[M]
R423	ERJ3GEYJ473V	47K 1/16W	[M]
R424	ERJ3GEYJ153V	15K 1/16W	[M]
R425	ERJ3GEYJ682V	6.8K 1/16W	[M]
R426	ERJ3GEYJ102V	1K 1/16W	[M]
R427	ERJ3GEYJ682V	6.8K 1/16W	[M]
R428	ERJ3GEYJ102V	1K 1/16W	[M]
R448	ERJ3GEYJ820V	82 1/16W	[M]
R449	ERJ3GEYJ820V	82 1/16W	[M]
R451	ERJ3GEYJ820V	82 1/16W	[M]
R452	ERJ3GEYJ820V	82 1/16W	[M]
R454	ERJ3GEYJ103V	10K 1/16W	[M]
R503	ERDS2TJ332T	3.3K 1/4W	[M]
R504	ERDS2TJ123T	12K 1/4W	[M]
R507	ERDS2TJ103T	10K 1/4W	[M]
R509	ERDS2TJ472T	4.7K 1/4W	[M]
R510	ERDS2TJ122T	1.2K 1/4W	[M]
R511	ERDS2TJ182T	1.8K 1/4W	[M]
R512	ERDS2TJ151T	150 1/4W	[M]
R513	ERDS2TJ331T	330 1/4W	[M]
R516	ERDS2TJ222T	2.2K 1/4W	[M]
R517	ERDS2TJ331T	330 1/4W	[M]
R518	ERDS2TJ122T	1.2K 1/4W	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
R519	ERDS2TJ2R2T	2.2 1/4W	[M]
R520	ERDS2TJ2R2T	2.2 1/4W	[M]
R521	ERDS2TJ101T	100 1/4W	[M]
R524	ERDS2TJ2R2T	2.2 1/4W	[M]
R525	ERDS2TJ272T	2.7K 1/4W	[M]
R526	ERDS2TJ103T	10K 1/4W	[M]
R527	ERDS2TJ561T	560 1/4W	[M]
R528	ERDS2TJ272T	2.7K 1/4W	[M]
R529	ERDS1FVJ332T	3.3K 1/2W	[M] ⚠
R530	ERD2FCVG270T	27 1/4W	[M]
R531	ERDS1FVJ150T	15 1/2W	[M] ⚠
R532	ERDS2TJ102T	1K 1/4W	[M]
R533	ERDS2TJ102T	1K 1/4W	[M]
R534	ERD25FVJ4R7T	4.7 1/4W	[M]
R536	ERDS1FVJ100T	10 1/2W	[M] ⚠
R537	ERDS2TJ222T	2.2K 1/4W	[M]
R539	ERDS1FVJ392T	3.9K 1/2W	[M] ⚠
R540	ERDS2TJ683T	68K 1/4W	[M]
R541	ERDS2TJ683T	68K 1/4W	[M]
R542	ERDS2TJ562T	5.6K 1/4W	[M]
R543	ERDS2TJ562T	5.6K 1/4W	[M]
R544	ERDS2TJ683T	68K 1/4W	[M]
R545	ERDS2TJ683T	68K 1/4W	[M]
R546	ERDS2TJ223T	22K 1/4W	[M]
R547	ERDS2TJ124T	120K 1/4W	[M]
R548	ERDS2TJ104T	100K 1/4W	[M]
R549	ERDS1FVJ2R2T	2.2 1/2W	[M] ⚠
R550	ERDS2TJ222T	2.2K 1/4W	[M]
R551	ERDS2TJ103T	10K 1/4W	[M]
R552	ERDS1FVJ100T	10 1/2W	[M] ⚠
R553	ERDS1FVJ100T	10 1/2W	[M] ⚠
R554	ERDS2TJ334T	330K 1/4W	[M]
R556	ERD2FCVG270T	27 1/4W	[M]
R557	ERDS1FVJ270T	27 1/2W	[M] ⚠
R565	ERDS2TJ104T	100K 1/4W	[M]
R567	ERDS2TJ151T	150 1/4W	[M]
R576	ERDS2TJ103T	10K 1/4W	[M]
R577	ERDS2TJ103T	10K 1/4W	[M]
R578	ERDS2TJ331T	330 1/4W	[M]
R580	ERDS1FVJ180T	18 1/2W	[M] ⚠
R581	ERDS1FVJ180T	18 1/2W	[M] ⚠
R583	ERDS2TJ821T	820 1/4W	[M]
R584	ERDS2TJ151T	150 1/4W	[M]
R586	ERDS2TJ150T	15 1/4W	[M]
R587	ERC12UGK335D	3.3M 1/2W	[M] ⚠
R600	ERJ3GEYJ102V	1K 1/16W	[M]
R601	ERJ3GEYJ102V	1K 1/16W	[M]
R602	ERJ3GEYJ122V	1.2K 1/16W	[M]
R603	ERJ3GEYJ182V	1.8K 1/16W	[M]
R604	ERJ3GEYJ222V	2.2K 1/16W	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
R605	ERJ3GEYJ272V	2.7K 1/16W	[M]
R606	ERJ3GEYJ472V	4.7K 1/16W	[M]
R607	ERJ3GEYJ102V	1K 1/16W	[M]
R608	ERJ3GEYJ102V	1K 1/16W	[M]
R609	ERJ3GEYJ122V	1.2K 1/16W	[M]
R610	ERJ3GEYJ182V	1.8K 1/16W	[M]
R611	ERJ3GEYJ222V	2.2K 1/16W	[M]
R612	ERJ3GEYJ272V	2.7K 1/16W	[M]
R613	ERJ3GEYJ472V	4.7K 1/16W	[M]
R614	ERJ3GEYJ682V	6.8K 1/16W	[M]
R615	ERJ3GEYJ103V	10K 1/16W	[M]
R616	ERJ3GEYJ102V	1K 1/16W	[M]
R617	ERJ3GEYJ102V	1K 1/16W	[M]
R618	ERJ3GEYJ122V	1.2K 1/16W	[M]
R619	ERJ3GEYJ182V	1.8K 1/16W	[M]
R620	ERJ3GEYJ222V	2.2K 1/16W	[M]
R621	ERJ3GEYJ272V	2.7K 1/16W	[M]
R622	ERJ3GEYJ472V	4.7K 1/16W	[M]
R642	ERJ3GEYJ392V	3.9K 1/16W	[M]
R658	ERJ3GEYJ101V	100 1/16W	[M]
R659	ERJ3GEYJ472V	4.7K 1/16W	[M]
R660	ERJ3GEYJ102V	1K 1/16W	[M]
R662	ERJ3GEYJ102V	1K 1/16W	[M]
R663	ERJ3GEYJ102V	1K 1/16W	[M]
R678	ERJ3GEYJ681V	680 1/16W	[M]
R679	ERJ3GEYJ333V	33K 1/16W	[M]
R680	ERJ3GEYJ104V	100K 1/16W	[M]
R681	ERJ3GEYJ104V	100K 1/16W	[M]
R682	ERJ3GEYJ104V	100K 1/16W	[M]
R683	ERJ3GEYJ103V	10K 1/16W	[M]
R684	ERJ3GEYJ103V	10K 1/16W	[M]
R685	ERJ3GEYJ103V	10K 1/16W	[M]
R686	ERJ3GEYJ821V	820 1/16W	[M]
R687	ERJ3GEYJ103V	10K 1/16W	[M]
R688	ERJ3GEYJ101V	100 1/16W	[M]
R689	ERJ3GEYJ101V	100 1/16W	[M]
R690	ERJ3GEYJ101V	100 1/16W	[M]
R696	ERJ3GEYJ470V	47 1/16W	[M]
R697	ERJ3GEY0R00V	0 1/16W	[M]
R698	ERJ3GEY0R00V	0 1/16W	[M]
R699	ERJ3GEY0R00V	0 1/16W	[M]
R700	ERJ3GEY0R00V	0 1/16W	[M]
R701	ERJ3GEYJ4R7V	4.7 1/16W	[M]
R702	ERJ3GEYJ103V	10K 1/16W	[M]
R704	ERJ3GEYJ102V	1K 1/16W	[M]
R705	ERJ3GEYJ154V	150K 1/16W	[M]
R706	ERJ3GEYJ102V	1K 1/16W	[M]
R707	ERJ3GEYJ393V	39K 1/16W	[M]
R708	ERJ3GEYJ223V	22K 1/16W	[M]
R709	ERJ3GEYJ473V	47K 1/16W	[M]
R711	ERJ3GEYJ823V	82K 1/16W	[M]
R712	ERJ3GEYJ221V	220 1/16W	[M]
R714	ERJ3GEY0R00V	0 1/16W	[M]
R715	ERJ3GEYJ102V	1K 1/16W	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
R717	ERJ3GEYJ102V	1K 1/16W	[M]
R718	ERJ3GEYJ102V	1K 1/16W	[M]
R721	ERJ3GEYJ101V	100 1/16W	[M]
R723	ERJ3GEYJ682V	6.8K 1/16W	[M]
R724	ERJ6GEYJ183V	18K 1/10W	[M]
R725	ERJ3GEYJ391V	390 1/16W	[M]
R727	ERJ3GEYJ392V	3.9K 1/16W	[M]
R728	ERJ3GEYJ392V	3.9K 1/16W	[M]
R729	ERJ3GEYJ392V	3.9K 1/16W	[M]
R731	ERJ6GEYJ682V	6.8K 1/10W	[M]
R735	ERJ6GEYJ101V	100 1/10W	[M]
R736	ERJ3GEYJ101V	100 1/16W	[M]
R741	ERJ3GEYJ473V	47K 1/16W	[M]
R742	ERJ6GEYJ224V	220K 1/10W	[M]
R744	ERJ3GEYJ124V	120K 1/16W	[M]
R749	ERJ3GEYJ472V	4.7K 1/16W	[M]
R750	ERJ6GEYJ4R7V	4.7 1/10W	[M]
R753	ERJ3GEYJ100V	10 1/16W	[M]
R900	ERJ3GEYJ472V	4.7K 1/16W	[M]
R902	ERJ3GEYJ104V	100K 1/16W	[M]
R904	ERJ3GEYJ104V	100K 1/16W	[M]
R911	ERJ3GEYJ473V	47K 1/16W	[M]
R915	ERJ3GEYJ101V	100 1/16W	[M]
R916	ERJ3GEYJ101V	100 1/16W	[M]
R917	ERJ3GEY0R00V	0 1/16W	[M]
R918	ERJ3GEYJ106V	10M 1/16W	[M]
R919	ERJ3GEY0R00V	0 1/16W	[M]
R920	ERJ3GEYJ334V	330K 1/16W	[M]
R921	ERJ3GEYJ562V	5.6K 1/16W	[M]
R922	ERJ3GEY0R00V	0 1/16W	[M]
R923	ERJ3GEYJ103V	10K 1/16W	[M]
R924	ERJ3GEYJ223V	22K 1/16W	[M]
R925	ERJ3GEYJ105V	1M 1/16W	[M]
R926	ERJ3GEYJ102V	1K 1/16W	[M]
R931	ERJ3GEYJ472V	4.7K 1/16W	[M]
R932	ERJ3GEYJ223V	22K 1/16W	[M]
R933	ERJ3GEYJ471V	470 1/16W	[M]
R934	ERJ3GEYJ472V	4.7K 1/16W	[M]
R935	ERJ3GEYJ223V	22K 1/16W	[M]
R937	ERJ3GEYJ474V	470K 1/16W	[M]
R938	ERJ3GEYJ472V	4.7K 1/16W	[M]
R939	ERJ3GEYJ104V	100K 1/16W	[M]
R940	ERJ3GEYJ104V	100K 1/16W	[M]
R941	ERJ3GEYJ104V	100K 1/16W	[M]
R943	ERJ3GEYJ472V	4.7K 1/16W	[M]
R944	ERJ3GEYJ472V	4.7K 1/16W	[M]
R945	ERJ3GEYJ101V	100 1/16W	[M]
R946	ERJ3GEYJ101V	100 1/16W	[M]
R947	ERJ3GEYJ101V	100 1/16W	[M]
R948	ERJ3GEYJ472V	4.7K 1/16W	[M]
R950	ERJ3GEYJ223V	22K 1/16W	[M]
R951	ERJ3GEYJ102V	1K 1/16W	[M]
R952	ERJ3GEYJ101V	100 1/16W	[M]
R954	ERJ3GEYJ103V	10K 1/16W	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
R955	ERJ3GEYJ562V	5.6K 1/16W	[M]
R956	ERJ3GEYJ562V	5.6K 1/16W	[M]
R957	ERJ3GEYJ562V	5.6K 1/16W	[M]
R958	ERJ3GEYJ562V	5.6K 1/16W	[M]
R959	ERJ3GEYJ472V	4.7K 1/16W	[M]
R960	ERJ3GEYJ102V	1K 1/16W	[M]
R962	ERJ3GEYJ681V	680 1/16W	[M]
R964	ERJ3GEYJ681V	680 1/16W	[M]
R965	ERJ3GEYJ681V	680 1/16W	[M]
R966	ERJ3GEYJ681V	680 1/16W	[M]
R967	ERJ3GEY0R00V	0 1/16W	[M]
R968	ERJ3GEYJ562V	5.6K 1/16W	[M]
R970	ERJ3GEYJ103V	10K 1/16W	[M]
R971	ERJ3GEYJ103V	10K 1/16W	[M]
R972	ERDS2TJ821T	820 1/4W	[M]
R972	ERJ3GEYJ103V	10K 1/16W	[M]
R973	ERDS2TJ393T	39K 1/4W	[M]
R973	ERJ3GEYJ101V	100 1/16W	[M]
R984	ERJ3GEYJ102V	1K 1/16W	[M]
R1101	ERDS2TJ270T	27 1/4W	[M]
R1102	ERDS2TJ152T	1.5K 1/4W	[M]
R1103	ERDS2TJ183T	18K 1/4W	[M]
R1104	ERDS2TJ103T	10K 1/4W	[M]
R1105	ERDS2TJ222T	2.2K 1/4W	[M]
R1106	ERDS2TJ104T	100K 1/4W	[M]
R1107	ERDS2TJ102T	1K 1/4W	[M]
R1109	ERDS2TJ392T	3.9K 1/4W	[M]
R1110	ERDS2TJ333T	33K 1/4W	[M]
R1111	ERDS2TJ102T	1K 1/4W	[M]
R1201	ERDS2TJ270T	27 1/4W	[M]
R1202	ERDS2TJ152T	1.5K 1/4W	[M]
R1203	ERDS2TJ183T	18K 1/4W	[M]
R1204	ERDS2TJ103T	10K 1/4W	[M]
R1205	ERDS2TJ222T	2.2K 1/4W	[M]
R1206	ERDS2TJ104T	100K 1/4W	[M]
R1207	ERDS2TJ102T	1K 1/4W	[M]
R1209	ERDS2TJ392T	3.9K 1/4W	[M]
R1210	ERDS2TJ333T	33K 1/4W	[M]
R1211	ERDS2TJ102T	1K 1/4W	[M]
R1302	ERDS2TJ101T	100 1/4W	[M]
R1303	ERDS2TJ475T	4.7M 1/4W	[M]
R1304	ERDS2TJ223T	22K 1/4W	[M]
R1305	ERDS2TJ103T	10K 1/4W	[M]
R1307	ERDS2TJ220T	22 1/4W	[M]
R1308	ERDS2TJ220T	22 1/4W	[M]
R1309	ERDS2TJ471T	470 1/4W	[M]
R1313	ERDS2TJ103T	10K 1/4W	[M]
R1314	ERDS2TJ102T	1K 1/4W	[M]
R1317	ERDS2TJ223T	22K 1/4W	[M]
R1318	ERDS2TJ103T	10K 1/4W	[M]
R1319	ERDS2TJ123T	12K 1/4W	[M]
R1320	ERDS2TJ104T	100K 1/4W	[M]
R1321	ERDS2TJ470T	47 1/4W	[M]
R1322	ERDS2TJ823T	82K 1/4W	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
R1323	ERDS2TJ332T	3.3K 1/4W	[M]
R1326	ERDS2TJ562T	5.6K 1/4W	[M]
R1327	ERDS2TJ472T	4.7K 1/4W	[M]
R1328	ERDS2TJ153T	15K 1/4W	[M]
R1329	ERDS2TJ472T	4.7K 1/4W	[M]
R1330	ERD2FCVJ4R7T	4.7 1/4W	[M]
R1331	ERDS2TJ752T	7.5K 1/4W	[M]
R1332	ERDS2TJ103T	10K 1/4W	[M]
R1333	ERD2FCVJ4R7T	4.7 1/4W	[M]
R1334	ERDS2TJ223T	22K 1/4W	[M]
R1335	ERDS2TJ152T	1.5K 1/4W	[M]
R1336	ERDS2TJ152T	1.5K 1/4W	[M]
R1337	ERDS2TJ103T	10K 1/4W	[M]
R1339	ERDS2TJ102T	1K 1/4W	[M]
R1341	ERDS2TJ681T	680 1/4W	[M]
R1343	ERDS2TJ332T	3.3K 1/4W	[M]
R1344	ERDS2TJ273T	27K 1/4W	[M]
R1345	ERDS2TJ102T	1K 1/4W	[M]
R1346	ERDS2TJ103T	10K 1/4W	[M]
		CAPACITORS	
C1	ECEA1CKA101B	100 16V	[M]
C1	F1D1H5R6A017	5.6P 50V	[M]
C2	ECBT1E103ZF5	0.01 25V	[M]
C2	F1D1H102A029	1000P 50V	[M]
C3	F1D1H2R2A017	2.2P 50V	[M]
C4	ECBT1H181KB5	180P 50V	[M]
C5	F1D1H5R6A017	5.6P 50V	[M]
C6	F1D1H3R3A017	3.3P 50V	[M]
C7	F1D1H4R7A017	4.7P 50V	[M]
C8	F1D1H3R3A017	3.3P 50V	[M]
C9	F1D1H2R2A017	2.2P 50V	[M]
C10	ECBT1H180JC5	18P 50V	[M]
C11	F1D1H102A029	1000P 50V	[M]
C101	ECUV1E103KBV	0.01 25V	[M]
C102	ECA1CAK100XB	10 16V	[M]
C103	ECUV1E103KBV	0.01 25V	[M]
C104	ECJ1VB1H102K	1000P 50V	[M]
C106	ECUV1H103KBV	0.01 50V	[M]
C107	ECUV1C473KBV	0.047 16V	[M]
C108	ECUV1H080DCV	8P 50V	[M]
C109	ECJ1VB1H102K	1000P 50V	[M]
C110	ECUV1E103KBV	0.01 25V	[M]
C111	ECA1HAK4R7XB	4.7 50V	[M]
C112	ECUV1E103KBV	0.01 25V	[M]
C113	ECJ1VB1H102K	1000P 50V	[M]
C114	ECA1HAK3R3XB	3.3 50V	[M]
C115	ECA1HAK4R7XB	4.7 50V	[M]
C116	ECUV1E333KBV	0.033 25V	[M]
C117	ECUV1E103KBV	0.01 25V	[M]
C118	ECUV1E103KBV	0.01 25V	[M]
C119	F0A2A681A010	680P 100V	[M]
C120	ECA1CAK100XB	10 16V	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
C121	ECA1HAKR47XB	0.47 50V	[M]
C122	ECA1HAK010XB	1 50V	[M]
C123	ECA1HAK010XB	1 50V	[M]
C124	ECJ1VC1H101K	100P 50V	[M]
C125	ECA1CAK220XB	22 16V	[M]
C126	ECUVNA105ZFV	10 10V	[M]
C127	ECA1CAK220XB	22 16V	[M]
C129	ECA0JAK101XB	100 6.3V	[M]
C130	ECA0JAK101XB	100 6.3V	[M]
C131	ECJ1VC1H151J	150P 50V	[M]
C132	ECJ1VB1H102K	1000P 50V	[M]
C133	ECUV1H270JCV	27P 50V	[M]
C134	ECUV1H270JCV	27P 50V	[M]
C136	ECJ1VB1H102K	1000P 50V	[M]
C137	ECUV1H332KBV	3300P 50V	[M]
C138	ECUV1E103KBV	0.01 25V	[M]
C139	ECA1HAK4R7XB	4.7 50V	[M]
C141	ECA1HAK010XB	1 50V	[M]
C142	ECA1HAK010XB	1 50V	[M]
C143	ECUV1H682KBV	6800P 50V	[M]
C144	ECUV1H682KBV	6800P 50V	[M]
C147	ECJ1VB1H102K	1000P 50V	[M]
C148	ECUV1E103KBV	0.01 25V	[M]
C149	ECUV1C104KBV	0.1 16V	[M]
C201	ECUV1H101JCV	100P 50V	[M]
C202	ECUV1H101JCV	100P 50V	[M]
C204	ECUV1H221KBV	220P 50V	[M]
C207	ECA1CAK100XB	10 16V	[M]
C219	ECA1HAK2R2XB	2.2 50V	[M]
C220	ECA1HAK2R2XB	2.2 50V	[M]
C221	ECA1HAK2R2XB	2.2 50V	[M]
C222	ECA1HAK4R7XB	4.7 50V	[M]
C225	ECA1HAKR15XB	0.15 50V	[M]
C226	ECUV1C563KBV	0.056 16V	[M]
C227	ECUV1H681KBV	680P 50V	[M]
C228	ECA1CAK100XB	10 16V	[M]
C229	ECUV1H101JCV	100P 50V	[M]
C230	ECJ1VC1H470J	47 50V	[M]
C231	ECA1CAK100XB	10 16V	[M]
C232	ECUV1H332KBV	3300P 50V	[M]
C236	ECUV1C474ZFV	0.47 16V	[M]
C237	ECJ1VB1H102K	1000P 50V	[M]
C238	ECUV1C473KBV	0.047 16V	[M]
C300	ECUV1E103KBV	0.01 25V	[M]
C301	ECJ1VB1H102K	1000P 50V	[M]
C303	ECUV1C104KBV	0.1 16V	[M]
C317	ECA1HAK2R2XB	2.2 50V	[M]
C318	ECUV1E103KBV	0.01 25V	[M]
C319	ECA1HAK100XB	10 50V	[M]
C320	ECUV1E103KBV	0.01 25V	[M]
C322	ECQV1H474JZ3	0.47 50V	[M]
C331	ECA1HAK4R7XB	4.7 50V	[M]
C363	ECJ1VC1H101K	100P 50V	[M]
C364	ECJ1VC1H101K	100P 50V	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
C365	ECUVNA154KBV	0.15 10V	[M]
C366	ECUV1C104KBV	0.1 16V	[M]
C367	ECUV1E473KBV	0.047 25V	[M]
C368	ECA1HAKR33XB	0.33 50V	[M]
C369	ECUVNA154KBV	0.15 10V	[M]
C370	ECA1HAKR33XB	0.33 50V	[M]
C371	ECA1HAKR33XB	0.33 50V	[M]
C372	ECUVNA154KBV	0.15 10V	[M]
C373	ECUVNA154KBV	0.15 10V	[M]
C374	ECUVNA154KBV	0.15 10V	[M]
C375	ECUVNA154KBV	0.15 10V	[M]
C376	ECUVNE273KBV	0.027 25V	[M]
C377	ECUVNE273KBV	0.027 25V	[M]
C378	ECA1CAK100XB	10 16V	[M]
C379	ECUVNE273KBV	0.027 25V	[M]
C380	ECUVNE273KBV	0.027 25V	[M]
C381	ECUV1E562KBV	5600P 25V	[M]
C382	ECUV1E562KBV	5600P 25V	[M]
C383	ECUV1E562KBV	5600P 25V	[M]
C384	ECUV1E562KBV	5600P 25V	[M]
C385	ECUV1H182KBV	1800P 50V	[M]
C386	ECUV1H182KBV	1800P 50V	[M]
C387	ECQV1H224JZ3	0.22 50V	[M]
C388	ECUV1C683KBV	0.068 16V	[M]
C390	ECUV1C683KBV	0.068 16V	[M]
C391	ECUVNA154KBV	0.15 10V	[M]
C392	ECUV1C683KBV	0.068 16V	[M]
C393	ECUV1C683KBV	0.068 16V	[M]
C394	ECUV1C683KBV	0.068 16V	[M]
C395	ECUV1C104KBV	0.1 16V	[M]
C396	ECUV1C683KBV	0.068 16V	[M]
C397	ECUV1A224KBV	0.22 10V	[M]
C398	ECQV1H104JZ3	0.1 50V	[M]
C399	ECUVNA154KBV	0.15 10V	[M]
C400	ECA1AM221B	220 10V	[M]
C401	ECUV1H101JCV	100P 50V	[M]
C402	ECUV1H101JCV	100P 50V	[M]
C404	ECUV1H221KBV	220P 50V	[M]
C405	ECUV1A224KBV	0.22 10V	[M]
C407	ECA1CAK100XB	10 16V	[M]
C408	ECA1CAK100XB	10 16V	[M]
C409	ECA1CAK100XB	10 16V	[M]
C410	ECA1CAK100XB	10 16V	[M]
C413	ECUV1C104KBV	0.1 16V	[M]
C415	ECUV1C473KBV	0.047 16V	[M]
C416	ECJ1VB1H472K	4700P 50V	[M]
C417	ECA1HAKR33XB	0.33 50V	[M]
C418	ECA1CAK100XB	10 16V	[M]
C419	ECA1HAK2R2XB	2.2 50V	[M]
C420	ECA1HAK2R2XB	2.2 50V	[M]
C421	ECA1HAK2R2XB	2.2 50V	[M]
C422	ECA1HAK4R7XB	4.7 50V	[M]
C425	ECA1HAKR15XB	0.15 50V	[M]
C426	ECUV1C563KBV	0.056 16V	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
C427	ECUV1H681KBV	680P 50V	[M]
C428	ECA1CAK100XB	10 16V	[M]
C429	ECUV1H101JCV	100P 50V	[M]
C430	ECJ1VC1H470J	47 50V	[M]
C431	ECA1CAK100XB	10 16V	[M]
C432	ECUV1H332KBV	3300P 50V	[M]
C437	ECJ1VB1H102K	1000P 50V	[M]
C438	ECUV1C473KBV	0.047 16V	[M]
C501	F1D1H102A012	1000P 50V	[M]
C502	F1D1H102A012	1000P 50V	[M]
C503	F1D1H331A012	330P 50V	[M]
C504	F1D1H331A012	330P 50V	[M]
C506	ECA1HAM222XE	2200 50V	[M]
C507	ECA1HAM222XE	2200 50V	[M]
C508	ECA1EAM222XE	2200 25V	[M]
C511	ECKR1H103ZF5	0.01 50V	[M]
C512	ECA1CAK101XB	100 16V	[M]
C513	ECKR1H103ZF5	0.01 50V	[M]
C514	ECA1AAK330XB	33 10V	[M]
C518	ECKR1H103ZF5	0.01 50V	[M]
C519	ECA1HAK100XB	10 50V	[M]
C520	ECKR1H103ZF5	0.01 50V	[M]
C521	ECA1EAK330XB	33 25V	[M]
C523	ECA1HAK010XB	1 50V	[M]
C524	ECA1HAK010XB	1 50V	[M]
C526	ECA1HM330B	33 50V	[M]
C527	ECKR1H103ZF5	0.01 50V	[M]
C528	ECKR1H103ZF5	0.01 50V	[M]
C530	ECKR2H103ZF5	0.01 500V	[M]
C531	ECKR2H103ZF5	0.01 500V	[M]
C532	ECKR2H103ZF5	0.01 500V	[M]
C533	ECQV1H104JZ3	0.1 50V	[M]
C534	ECKR2H103ZF5	0.01 500V	[M]
C536	ECA0JAK221XB	220 6.3V	[M]
C537	F1D1H102A012	1000P 50V	[M]
C540	ECBT1H150JC5	15P 50V	[M]
C541	ECBT1H150JC5	15P 50V	[M]
C542	ECEA2AU100B	10 100V	[M]
C543	ECA2AM100B	10 100V	[M]
C544	F1D1H1040002	0.1 50V	[M]
C545	F1D1H1040002	0.1 50V	[M]
C546	F1D1H1040002	0.1 50V	[M]
C547	F1D1H1040002	0.1 50V	[M]
C553	ECA1HAK3R3XB	3.3 50V	[M]
C554	ECA1HAK3R3XB	3.3 50V	[M]
C575	ECA1HAK4R7XB	4.7 50V	[M]
C576	ECA1CM102B	1000 16V	[M]
C577	ECA1CM102B	1000 16V	[M]
C578	ECKR1H103ZF5	0.01 50V	[M]
C580	ECKR1H103ZF5	0.01 50V	[M]
C581	ECA1HM470B	47 50V	[M]
C582	ECKR2H103ZF5	0.01 500V	[M]
C583	ECKR1H103ZF5	0.01 50V	[M]
C585	ECA1EM101B	100 25V	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
C604	ECJ1VB1E223K	0.022 25V	[M]
C606	ECJ1VB1E223K	0.022 25V	[M]
C611	ECUV1C104KBV	0.1 16V	[M]
C612	ECJ1VB1H102K	1000P 50V	[M]
C613	ECUV1H681KBV	680P 50V	[M]
C614	ECUV1H681KBV	680P 50V	[M]
C615	ECUV1H101JCV	100P 50V	[M]
C616	ECUV1H101JCV	100P 50V	[M]
C622	ECUV1H103KBV	0.01 50V	[M]
C623	ECUV1C104KBV	0.1 16V	[M]
C624	ECA0JAK101XB	100 6.3V	[M]
C625	ECA0JM102B	1000P 6.3V	[M]
C626	ECJ1VB1H102K	1000P 50V	[M]
C627	ECUV1H103KBV	0.01 50V	[M]
C628	ECEA1CKA220B	22 16V	[M]
C629	ECJ1VB1H102K	1000P 50V	[M]
C630	ECUV1H561KBV	560P 50V	[M]
C631	ECUV1H561KBV	560P 50V	[M]
C632	ECJ1VB1H102K	1000P 50V	[M]
C633	ECJ1VB1H102K	1000P 50V	[M]
C634	ECJ1VB1H102K	1000P 50V	[M]
C635	ECUV1H561KBV	560P 50V	[M]
C636	ECUV1H561KBV	560P 50V	[M]
C637	ECUV1H561KBV	560P 50V	[M]
C638	ECUV1H561KBV	560P 50V	[M]
C639	ECUV1H561KBV	560P 50V	[M]
C647	ECUV1H103KBV	0.01 50V	[M]
C651	ECJ1VC1H150J	150 50V	[M]
C652	ECUV1H101JCV	100P 50V	[M]
C654	ECUV1H180JCV	18P 50V	[M]
C655	ECUV1H101JCV	100P 50V	[M]
C656	ECUV1H390JCV	39P 50V	[M]
C657	ECUV1H390JCV	39P 50V	[M]
C658	ECA1HAK010XB	1 50V	[M]
C659	ECUV1H220JCV	22P 50V	[M]
C661	ECUV1H220JCV	22P 50V	[M]
C662	ECA1HAK2R2XB	2.2 50V	[M]
C663	ECUV1C104KBV	0.1 16V	[M]
C664	ECUV1C104KBV	0.1 16V	[M]
C674	ECA1HAK4R7XB	4.7 50V	[M]
C701	ECEA0JKA330I	33 6.3V	[M]
C702	ECUV1C104KBV	0.1 16V	[M]
C703	ECEA0JKA101I	100 6.3V	[M]
C704	ECUV1C104KBV	0.1 16V	[M]
C706	ECUV1H272KBV	2700P 50V	[M]
C707	ECUV1E273KBV	0.027 25V	[M]
C710	ECUV1H121KCV	120P 50V	[M]
C711	ECUV1C104ZFV	0.1 16V	[M]
C712	ECUV1C104ZFV	0.1 16V	[M]
C713	ECUV1C104KBV	0.1 16V	[M]
C714	ECEA0JKA101I	100 6.3V	[M]
C715	ECUV1H272KBV	2700P 50V	[M]
C716	ECUV1H821KBN	820P 50V	[M]
C717	ECUV1C104ZFV	0.1 16V	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
C718	ECUV1A224KBV	0.22 10V	[M]
C721	ECUV1H100DCV	10P 50V	[M]
C722	ECUV1H100DCV	10P 50V	[M]
C723	ECEA1AKA221I	220 10V	[M]
C724	ECUZ1E104MBN	0.1 25V	[M]
C725	ECUV1H102KBV	1000P 50V	[M]
C726	ECUV1H102KBV	1000P 50V	[M]
C727	ECA1HAK010XI	1 50V	[M]
C728	ECA1HAK010XI	1 50V	[M]
C730	ECUV1C104ZFV	0.1 16V	[M]
C731	ECEA0JKA221I	220 6.3V	[M]
C732	ECEA0JKA221I	220 6.3V	[M]
C733	ECUV1C104KBV	0.1 16V	[M]
C734	ECEA1AKA221I	220 10V	[M]
C735	ECUVNE104ZFN	0.1 25V	[M]
C736	ECUV1C104ZFV	0.1 16V	[M]
C737	ECUV1C104ZFV	0.1 16V	[M]
C738	ECUV1H103KBN	0.01 50V	[M]
C739	ECUV1H152KBV	1500P 50V	[M]
C742	ECUV1E273KBV	0.027 25V	[M]
C743	ECUV1C104ZFV	0.1 16V	[M]
C744	ECUV1H562KBV	5600P 50V	[M]
C745	ECUV1H102KBV	1000P 50V	[M]
C747	ECUV1H181KCV	180P 50V	[M]
C749	ECUV1H222KBV	2200P 50V	[M]
C750	ECUZ1E104MBN	0.1 25V	[M]
C751	ECUV1C104KBV	0.1 16V	[M]
C752	ECUV1H102KBV	1000P 50V	[M]
C753	ECUV1H471KBV	470P 50V	[M]
C754	ECUV1H471KBV	470P 50V	[M]
C900	ECUV1H101JCV	100P 50V	[M]
C901	ECUV1H101JCV	100P 50V	[M]
C902	ECUV1C104KBV	0.1 16V	[M]
C1101	ECA1HAK010XB	1 50V	[M]
C1102	F1D1H102A012	1000P 50V	[M]
C1103	ECA1CAK101XB	100 16V	[M]
C1104	ECFR1C273KR	0.027 16V	[M]
C1105	F1D1H471A012	470P 50V	[M]
C1106	ECA1HAK2R2XB	2.2 50V	[M]
C1107	ECBT1C152KR5	1500P 16V	[M]
C1108	ECA1CAK100XB	10 16V	[M]
C1109	ECA1HAK3R3XB	3.3 50V	[M]
C1121	F1D1H102A012	1000P 50V	[M]
C1122	ECBT1H103KB5	0.01 50V	[M]
C1123	F1D1H271A012	270P 50V	[M]
C1201	ECA1HAK010XB	1 50V	[M]
C1202	F1D1H102A012	1000P 50V	[M]
C1203	ECA1CAK101XB	100 16V	[M]
C1204	ECFR1C273KR	0.027 16V	[M]
C1205	F1D1H471A012	470P 50V	[M]
C1206	ECA1HAK2R2XB	2.2 50V	[M]
C1207	ECBT1H152KB5	1500P 50V	[M]
C1208	ECA1CAK100XB	10 16V	[M]
C1209	ECA1HAK3R3XB	3.3 50V	[M]

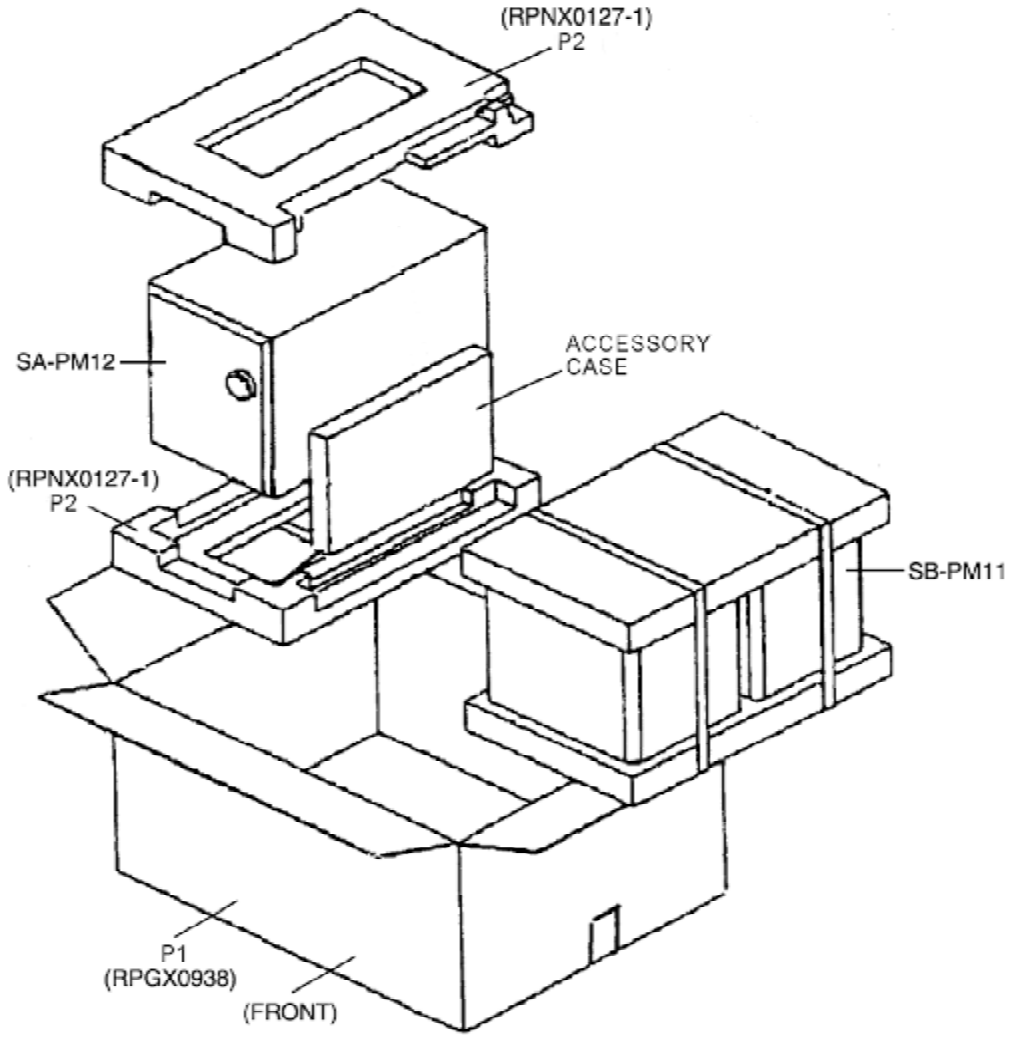
Ref. No.	Part No.	Part Name & Descritpion	Remarks
C1221	F1D1H102A012	1000P 50V	[M]
C1222	ECBT1H103KB5	0.01 50V	[M]
C1223	F1D1H271A012	270P 50V	[M]
C1301	ECA1HAK0R1XB	0.1 50V	[M]
C1302	ECFR1C333KR	0.033 16V	[M]
C1303	ECFR1C333KR	0.033 16V	[M]
C1304	ECA1HAK4R7XB	4.7 50V	[M]
C1305	ECA1CAK330XB	33 16V	[M]
C1306	ECA1CAK100XB	10 16V	[M]
C1307	ECEA1AKA221Q	220 10V	[M]
C1308	ECA1CAK220XB	22 16V	[M]
C1310	ECA1HAK0R1XB	0.1 50V	[M]
C1311	ECA1CAK470XB	47 16V	[M]
C1312	ECBT1C332KR5	3300P 16V	[M]
C1314	ECBT1C222KR5	2200P 16V	[M]
C1315	ECBT1C222KR5	2200P 16V	[M]
C1316	F1D1H102A012	1000P 50V	[M]
C1317	F1D1H102A012	1000P 50V	[M]
C1318	ECQV1H473JZ3	0.047 50V	[M]
C1319	ECA1CAK101XB	100 16V	[M]
C1320	ECA1HAK010XB	1 50V	[M]
C1321	ECQP1472JZT	4700P 100V	[M]
C1322	F0A2A102A010	1000P 100V	[M]
C1323	ECEA1HN010SB	1 50V	[M]
C1324	ECA1CAK470XB	47 16V	[M]
C1325	F1D1C103A004	0.01 16V	[M]
C1326	ECA1CAK100XB	10 16V	[M]
C1327	ECBT1H103KB5	0.01 50V	[M]
		CHIP JUMPER	
RJ701	ERJ6GEY0R00V	0 1/10W	[M]
RJ702	ERJ6GEY0R00V	0 1/10W	[M]
RJ704	ERJ6GEY0R00V	0 1/10W	[M]
RJ710	ERJ6GEY0R00V	0 1/10W	[M]
RJ712	ERJ6GEY0R00V	0 1/10W	[M]
RJ713	ERJ6GEY0R00V	0 1/10W	[M]
RJ714	ERJ6GEY0R00V	0 1/10W	[M]
RJ721	ERJ3GEY0R00V	0 1/16W	[M]
RJ722	ERJ3GEY0R00V	0 1/16W	[M]
RJ723	ERJ3GEY0R00V	0 1/16W	[M]
RJ724	ERJ3GEY0R00V	0 1/16W	[M]
RJ725	ERJ3GEY0R00V	0 1/16W	[M]
RJ726	ERJ3GEY0R00V	0 1/16W	[M]
RJ727	ERJ3GEY0R00V	0 1/16W	[M]
RJ728	ERJ3GEY0R00V	0 1/16W	[M]
RJ729	ERJ3GEY0R00V	0 1/16W	[M]
RJ730	ERJ3GEY0R00V	0 1/16W	[M]
RJ731	ERJ3GEY0R00V	0 1/16W	[M]
RJ732	ERJ3GEY0R00V	0 1/16W	[M]
RJ733	ERJ3GEY0R00V	0 1/16W	[M]
RJ734	ERJ3GEY0R00V	0 1/16W	[M]
RJ735	ERJ3GEY0R00V	0 1/16W	[M]
RJ736	ERJ3GEY0R00V	0 1/16W	[M]

Ref. No.	Part No.	Part Name & Descritpion	Remarks
RJ737	ERJ3GEY0R00V	0 1/16W	[M]
RJ738	ERJ3GEY0R00V	0 1/16W	[M]
RJ739	ERJ3GEY0R00V	0 1/16W	[M]
RJ740	ERJ3GEY0R00V	0 1/16W	[M]
RJ741	ERJ3GEY0R00V	0 1/16W	[M]
RJ742	ERJ3GEY0R00V	0 1/16W	[M]
		TEST JUMPER	
TJ701	EYF8CU	TEST JUMPER	

19.5. Packing Materials & Accessories Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPGX0938	PACKING CASE	[M]
P2	RPNX0127-1	POLYFOAM	[M]
P3	RPHV0001	MIRAMAT SHEET	[M]
		ACCESSORIES	
A1	N2QAGB000007	REMOTE CONTROL	[M]
A1-1	RKK-HTR0280	R/C BATTERY COVER	[M]
A2	RJA0065-A	AC CORD	[M] ⚠
A3	RQT5706-3P	O/I BOOK	[M]
A3	RQT5707-1M	O/I BOOK	[M]
A4	RSA0006-L	FM ANTENNA WIRE	[M]
A5	RSA0033A	AM LOOP ANTENNA	[M]

19.6. Packaging



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